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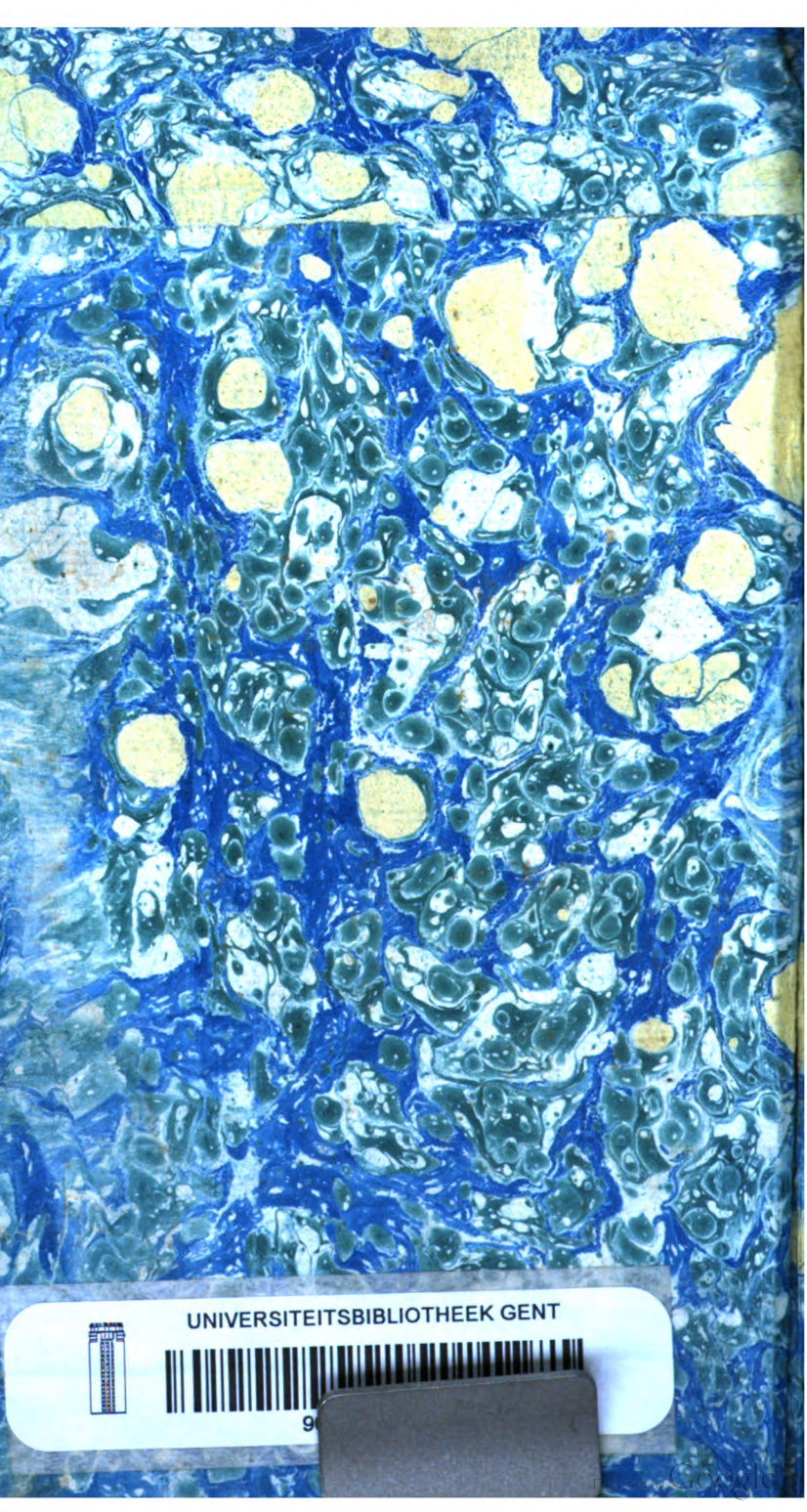
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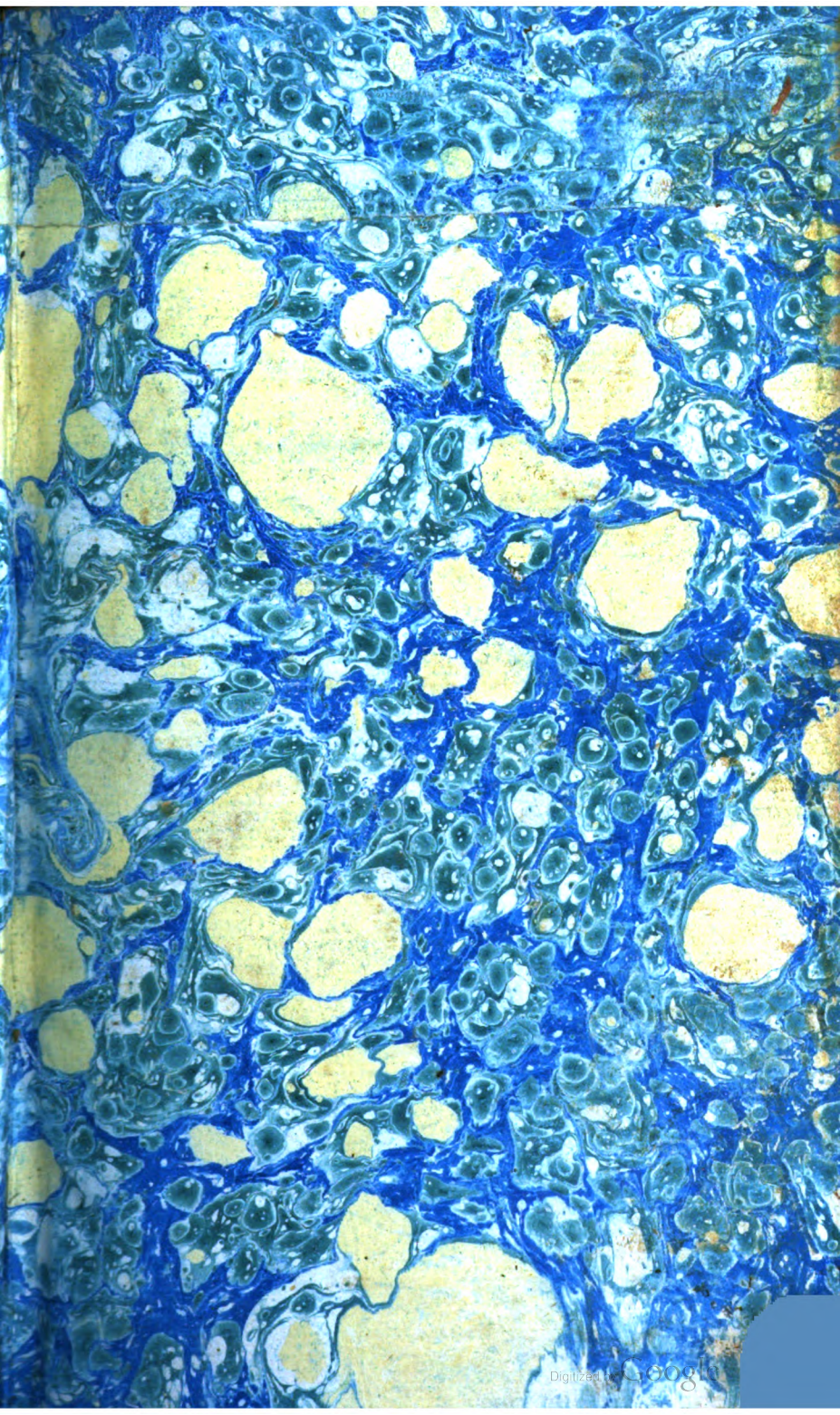
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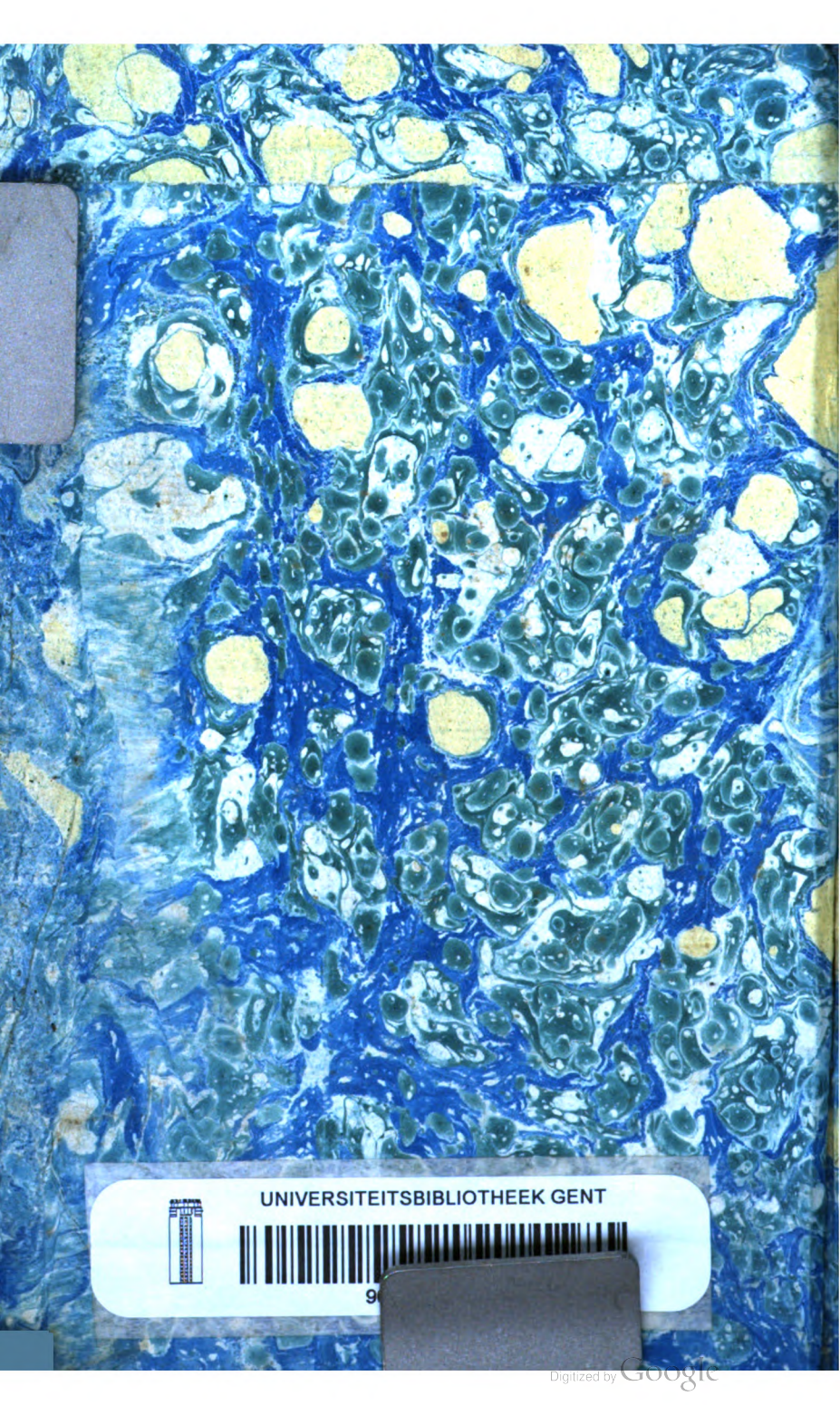
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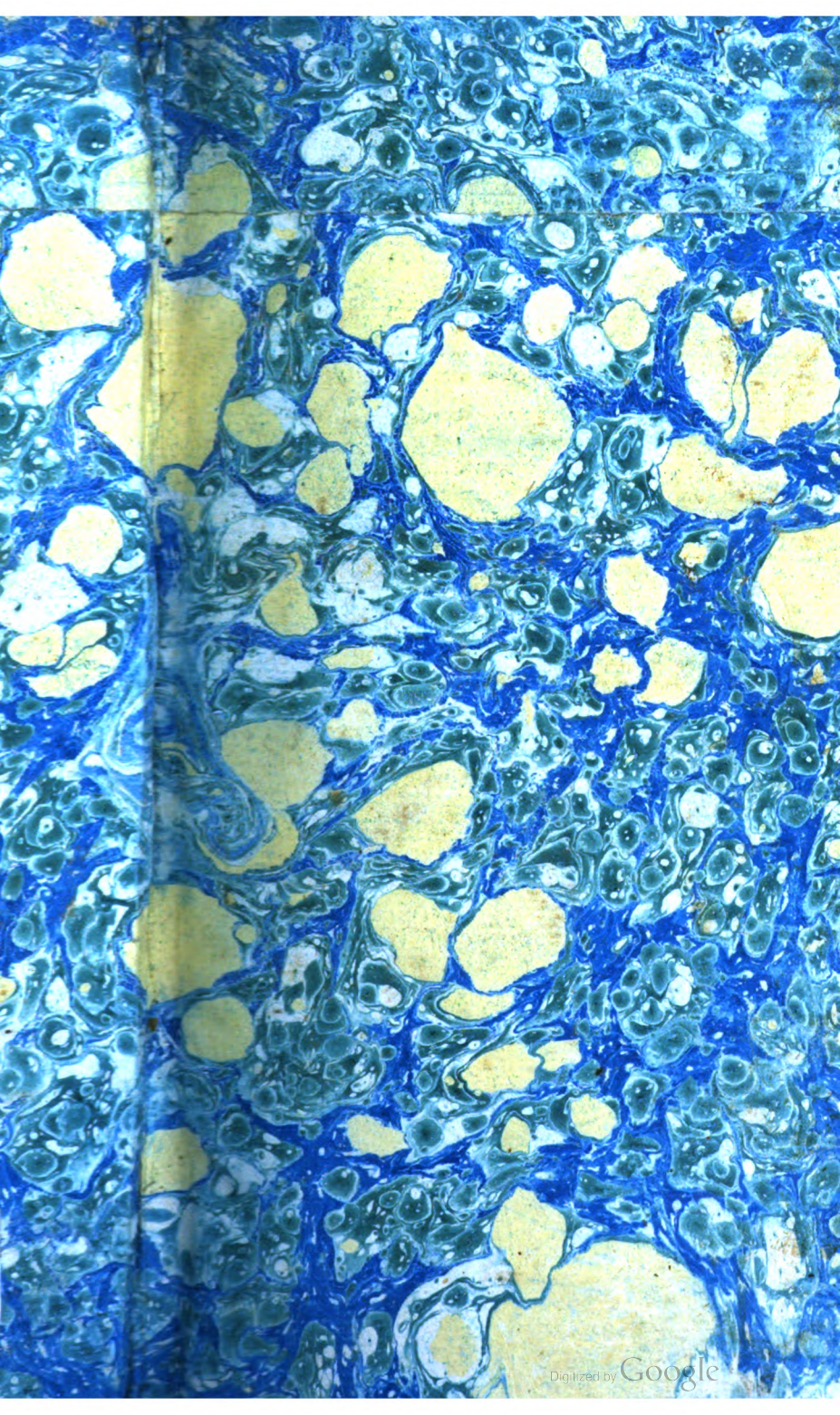
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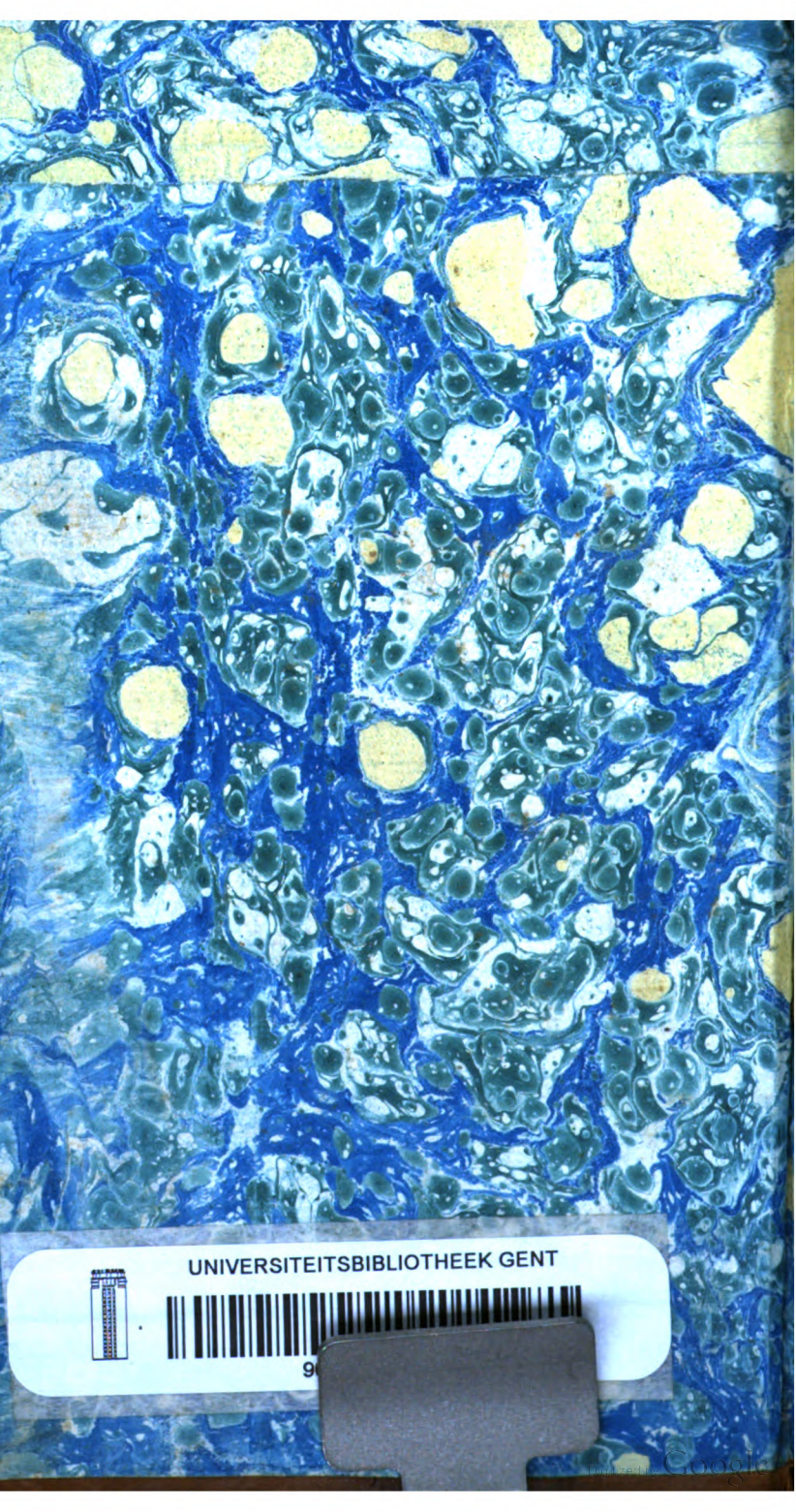
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No. 2.

(To be continued Annually.)

AS the boundaries of science extend, and the stores of literature accumulate, periodical arrangements of the accessions to knowledge become indispensable. There is scarcely a mind so happily constituted, so endowed with the powers of discrimination, as to have a clear and comprehensive view of the entire circle of science, in its present elaborated form. The novelties that daily arise, the changes in nomenclature, the intricacies of detail, or of theory, the plausibility of hypothesis altogether, present complicated difficulties, only to be conquered by dividing; a segregation of the different genera of science, and an arrangement of the species of these genera under distinct heads, can alone render perspicuous and easy, a subject become perplexed by the extent of its own improvements.

Those who are in the habit, either from inclination or duty, of inquiring into the progress of science, will feel the force of these observations; and will, perhaps, acknowledge some obligation to the pioneers of literature, "who remove rubbish, and clear away obstructions from the paths through which learning and genius press forward to conquest and glory."

In a view of the progress of discovery in the Art of Medicine, Anatomy and Physiology, comprehending a knowledge of the structure, functions, and habits of animal life — Natural History of the Atmosphere, and the effects of its variations on every species of vitality — Chemistry — Botany — Experimental Philosophy, command a priority of attention, as affording the principles, as well as furnishing materials for the rational practice of Physic.

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The wild hypotheses, that have from time to time obtruded into Medicine, have led astray less frequently, perhaps, the anatomist, than any other labourer in the field of science. His peculiar business it is to investigate facts by a developement of the structure; and from a knowledge of the structure to deduce the modes of operation in the animal functions. In proportion to the tangible nature of the objects of his investigations, is the precision of his conclusions. Even when he has deviated into the visionary world of muscular motion, his theories have not been mischievous: if they have not convinced, they have not led to destructive practice. If in the earliest ages of the art, the prejudices of mankind compelled him to guess at the internal structure of the human frame by an examination of a link lower in the chain, the refined state of the science now leads him, with increased ardour, to explain more precisely by comparative anatomy,* operations in life, still so obscure, as almost to be thought arcana of the deity. Muscular motion, generation, and digestion, require the decisive elucidation, that marks the bounds between opinion and knowledge. Mr. Home, in an interesting paper read to the Royal Society, has exerted much ingenuity of anatomical research to explain some circumstances in the process of digestion. By an examination of the structure of the stomach in a variety of animals, particularly those which appear to form the principal links in the gradation between the ruminant and truly carnivorous, a considerable advance has been made to explain the process of converting animal and vegetable substances into chyle. The conclusions that are drawn from this elaborate investigation, conjoined with the experiments of Spalanzani and Hunter, support the opinion that the stomach is the only seat of the digestive process; that the gastric juice is secreted by glands immediately attached to the œsophagus: and that the pylorus is chiefly a receptacle for the chyle. Anatomical knowledge has been much advanced by the art of making preparations. Injections of the blood-vessels and lymphatics have materially assisted an inquiry into the structure of these parts; but there is a species

* As the connection of comparative Anatomy with the study of Medicine, is now so far admitted, as to render it an object of importance, we have much satisfaction in recommending Prof. Blumenbach's short Treatise onthe subject as translated by Mr. Lawrence. Till the translation of this, a short elementary Treatise on this part of science was wanting in the English language.

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species of anatomical imitation, employed by the Ita
ans, and of which we have hitherto seen but few spe
mens in this country, which, if properly cultivated, mig
afford considerable facilities to anatomical study. The e
quisite perfection of the artists of that country in mod
ling the different parts of animal structure in *wax*, asto
ishes by the correct imitation, as much as by the beau
of the workmanship. Mr. Brooks, of the Anatomic
Theatre in Blenheim-Street, has models of the organs
sense, executed with inconceivable beauty and precisic
They were imported from Florence at a high price, and
present the structure and nerves of the organ of smell, t
eye, the ear, and the tongue. Very few, if any attemp
have been made in the other countries of Europe, to for
these representations of the parts of animal bodies. Franc
however, is emerging from this negligence; and has est
blished a school, under the superintendance of M. La
monier, at Rouen, for teaching the art of *anatomical m
delling* in wax. Already, it is said, have the specime
at this school, in the exactitude of detail, and in the tru
of imitation, emulated those manufactured at Florenc
It will not be readily admitted that England cannot furni
artists of skill, in every mechanical operation, equal
any that Italy or France can produce.

The art of Surgery derives all its precision, all its safet
from a knowledge of the structure of the parts it is to a
upon: not a step can it advance securely without its gui
Anatomy. At no period has this been more fully unde
stood than in the present. The advantages that have ar
sen from the application of expert anatomists to the scie
tific and operative parts of surgery, is very evident. Th
labours of Abernethy, Astley Cooper, Bell, &c. affo
strong testimonials of this fact.—In a system of operati
Surgery, founded on the basis of Anatomy, Mr. Charl
Bell has been very successful in subverting the pernicio
and dangerous doctrine, that a minute attention to Anat
my serves but to embarras, and render the surgeon tim
and indecisive. The first volume of this work at prese
only is published. A great number of sketches, taken b
the author from actual observation, accompany and eluc
date the text. The appearance of the second part of th
Anatomy and Surgical Treatment of Crural and Umbilic
Hernia, by Mr. Astley Cooper, cannot fail to improve th
part of practical surgery. The difficulties attending bo
the reduction of the Crural Hernia by the taxis, and th
operation when it is irreducible, must make a work on th
subjec

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subject, executed as this is, highly acceptable to the profession.* The progress of surgery in the year 1807, has been marked in England, if not by any fact that may be considered as an extraordinary discovery, by a variety of productions of considerable merit, and of great utility in explaining many circumstances in the different branches of this department of the medical art. A Treatise on the Diseases of the Joints, by Mr. Samuel Cooper, the Prize Essay at the College of Surgeons; Critical Reflections on several important practical points relative to Cataract, comprehending an account of a new and successful method of couching particular species of that disease, by the same author; Sir James Earle's Observations on Fractures of the Lower Limbs,—and Remarks on Hæmorrhoidal Excresences, cannot pass unnoticed. Every practitioner who has adopted the method suggested by Mr. Pott, of laying the limb on the side in fractures of the lower extremity, must have repeatedly experienced difficulty in keeping the fractured bones in just approximation. This short Essay, forcibly suggests, especially in fractured thigh bone, the expediency of returning to the old method of laying the patient on the back, and the limb straight. The principle of Mr. Pott, that of putting the muscles into a relaxed state, need not be altogether abandoned. By bending and raising the knee to any point, and securing the limb, if a fractured thigh, by very simple machinery, all the advantages of relaxing the muscles may be had, free of the hazards incurred by lying on the hip. A Treatise on Hernia, by Mr. Lawrence, also a Prize Essay, though it affords no new matter, presents a useful compilation of established facts and authorized opinions. The requisites of sound judgment, assiduous research, perspicuity of style and arrangement,

* The right mode of reducing crural hernia by the taxis is so little understood, that Mr. Cooper's directions for it cannot be too much known. The patient is to be placed in a recumbent posture, the shoulders a little elevated, and the thighs bent at right angles with the body: the knee of the affected side should likewise be carried inward. The surgeon is then to place himself over the body of the patient, and putting both his thumbs on the surface of the tumour, he is to press gently *directly downwards, as if he were endeavouring to press the tumour into the thigh rather than toward the abdomen.* If this pressure is steadily kept up for some minutes till the surface of the tumour is brought even with the line of the crural arch, the hernia may then be pressed toward the abdomen, and will return into the cavity. Much of the difficulty found in returning this species of hernia often depends on the improper direction given to the pressure.

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rangement, are evinced in a proportion extremely creditable to the author.

An accurate ascertainment of the state of the Atmosphere at any particular period, or for a series of periods; an exposition of the changes in temperature of climate, arising, perhaps, from causes very obscure; and an illustration of the morbid affections that may be supposed to have been produced, or to have been remedied by such changes, are circumstances that the faculty cannot look on with indifference. Whether certain classes of Disease arise out of some specific property in the Atmosphere itself; whether the air is a mere vehicle for the seeds of epidemics; and if so, what are the particular states of it influencing this property: whether the poisons that it conveys, if it is a mere carrier, are collected from swamps and bogs, loaded with gases from dead animal or vegetable matter, or furnished by effluvias arising from the surface of the living human body, are questions of no small importance. They are questions, indeed, upon which mankind have differed much and often; and upon which opinion is still unsettled to a degree that involves extreme doubt and indecision. The means furnished by modern Chemistry for ascertaining with considerable precision, the component parts of the air; the accurate and extensive registers of the weather, arranged with the prevalence of disease, and a variety of occurrences in nature, particularly in vegetation; and the elucidation that the subject has lately received, afford the means of pursuing the inquiry, and should certainly stimulate to a deeper research. An examination of the change that the climate and temperature of particular places have undergone in a long series of years, with the consequent effects on animal and vegetable life, is a labour, certainly, of no small interest, and probably of some utility. The mode in which the inquiry has usually been conducted, has, however, abstracted a portion of its usefulness. An hypothesis has been assumed, and the subsequent research directed to the collection of materials for its support. Mr. Williams, in Remarks on the Climate of Great Britain, has, perhaps, fallen into this error. In a work abounding with curious remark, and presenting novel and interesting views, the leading principle is, that the humidity and consequent coldness of our modern summers, is to be attributed to an increase of evaporating surface: and in a chapter devoted to the consideration of the influence of a cold and humid climate on the animal œconomy, the author labours to support an opinion that the increasing unhealthi-

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ness of Great Britain arises from this supposed change in the seasons. Interesting as inquiries after the change that time and various circumstances have induced in the climate of a country, doubtless are; there is, however, connected with them a degree of incertitude, and a disposition to hypothesis, that lowers their value. An inquiry into the changes produced on Atmospheric Air by the germination of seeds, the vegetation of plants, and the respiration of animals, is a subject of more direct and exact investigation. The alterations, whatever they are, become the immediate object of experiment; and, being in a measure, cognizable by the senses, are consequently more determinate than where recourse must be had to historical records made in remote periods of time, and by persons wanting the means of recording these natural phenomena with correctness. In an elaborate disquisition by Mr. Ellis, it is shewn that in the processes of germination, vegetation, and respiration, the oxygenous portion of the atmosphere disappears, while carbonic acid is formed; and that the carbonic acid produced, always bears a certain proportion to the oxygen gas lost.

Among the trains of morbid derangements supposed to be produced or increased by particular states of the atmosphere, popular opinion, at least, will give the foremost place to pulmonic complaints. The state of the atmosphere throughout Europe, during the summer of 1807, and the degree of disease accompanying this state, but ill accord with the hypothesis just mentioned.

At Paris the heat was intense, with long continued calms; and catarrhal affections, and phthisis pulmonalis were unusually frequent. In London, a longer series of hot weather has seldom occurred; and the frequency of pulmonic complaints in the months of June and July, seemed in some way connected with this increase of temperature. That disorders of the pulmonic system do not, however, always, or even frequently depend on particular states of the atmosphere, is rendered more than probable by Dr. Robert Bree's "Inquiry into Disordered Respiration." The celebrity of this work shews that the faculty have of late entertained more enlarged views of disorders generally referred to the lungs; and that in the investigation of the causes of such complaints, we ought to look farther for their seat. Many supposed pulmonary cases might have been saved, if the reasoning of this author had been earlier applied, and if a treatment calculated to remove local weakness had been advised in the place of

customary

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customary depletion and general relaxants. The means of removing obstructions from the viscera below the chest, are, in numerous instances, the best remedies for supposed and real pulmonary affection. The whole of this work, a fourth and considerably improved edition of which has appeared this year, offers a new pathology on the complaints called pulmonary, and very important reflections on their relations.

There are classes of disease which possibly arise, in part, from some changes in temperature and climate; but certainly connected with particular forms of society, and habits of life. Nervous complaints, as they are vaguely called, multiply in a ratio according with the approaches to that period of refined society which approximates with mental and coporeal debility. History and uniform experience agree, that the delicate and extenuated beings, whose frames cannot endure the exercises of former times, whose digestive organs nauseate the wholesome viands that supported their ancestors, whose intellects are too nicely attuned to listen, without disgust, even to descriptions of the domestic œconomy of their forefathers, have arrived at an acmé incompatible with undertakings that require strength of mind, and vigor of body. A train of morbid feelings, unknown to earlier ages and the manhood of society, afflict this offspring of luxury and refinement. Hypochondriasis with its proteus symptoms, Hysteria in every varied shape, comprehend, perhaps, all those fugacious and ill-defined complaints designated by the term Nervous. There can be little doubt, from whatever cause, or causes, it may arise, that the nervous temperature, as it has lately been called, is fast increasing in this country. In a work written expressly with the intent to counteract this predisposition, the causes are pointed out by contrasting the savage state with the last period of refinement. Man, living in all the simplicity of nature, is exempt from those bodily ailments and mental disquietudes, which are produced by the dissipations of civilized life. Health and vigour of body, with passive content of mind, are the inheritance of the untutored savage. In the population of large towns at a period of high civilization, composed of the idle and dissipated; literati; artificers, and manufacturers; those employed in drudgery; persons returned with broken constitutions from the Indies; and females, operated upon by various employments and modes of life, and the vices and preposterous customs of society; we are to look for the origin of physical degradation, and the source of nervous

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diseases. Among the causes that operate in increasing the nervous temperament, those that tend to destroy the spring and elasticity of the mind, are not the least formidable. If literature strengthens the intellect, it is when employed of a proper quality. The passion for novel reading, Dr. Trotter considers as one of the causes of nervous disorders, and reprobates it with just indignation.*

In the military hospitals of Germany, a method of treating Tetanus has been practised with great success. This consists of an alternate use of opium and carbonate of potash. M. Stutz, a physician of Suabia, was led to employ these two substances alternately, by some observations of M. Humboldt in his work on the nerves; and found that one third of the quantity of opium, used in this manner, produced the best effects.

Hydrophobia, as the consequence of the bite of rabid animals, is certainly the most severe and fatal of the morbid derangements in the class *Neuroses*. In the specific disease, every mode of treatment has hitherto been unavailing; death, we believe, has been the uniform termination. An extraordinary degree of alarm was excited in the early part of this year, in the metropolis and its vicinity, with respect to the prevalence of this disease among dogs: many persons were bitten, and excision of the bitten part as the most effectual preventive, was frequently employed: but it is probable few of the dogs were rabid. It is certain, however, that the genuine disease has occurred during the year. Under these circumstances, the attention of the faculty has been drawn to it, in an unusual degree. Dr. Bardsley, of Manchester, has industriously investigated the history and natural phenomena of the canine and spontaneous Hydrophobia. In the progress of the inquiry, he gives an epitome of the most remarkable facts and observations on the subject, dispersed in a multitude of writings; and details at large, the history of a case

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* "The mind that can amuse itself with the trash of most modern novels, seeks an enjoyment beneath the level of a rational being. It creates for itself an ideal world, on the loose descriptions of romantic love, that leaves passion without any moral guide in the real occurrences of human life.—To the female mind in particular, as being endued with finer feelings, this species of literary poison has often been fatal. How cautious, then, ought parents to be in guarding against the introduction of these romances among their children; so calculated to produce the morbid sensibility which is to be the bane of future happiness. It is lamentable that three fourths of these productions come from the pens of women; some of whom are known to have drank deep of the fountains of pleasure and adversity."

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case of Hydrophobia occuring twelve years after the bite of a supposed mad dog. An interesting part of the investigation relates to the origin of canine madness, and the means of its extirpation. From a full view of the subject, he concludes.

1st. That the disease always originates in the canine species.

2nd. That it never arises in them spontaneously.

3rd. That the contagion, when received by them, never remains latent more than a few months.

On these plain facts he founds his plan of extirpation. It consists merely in establishing an universal quarantine for dogs within the kingdom, and a total prohibition of the importation of these animals, during the existence of such quarantine.* Though every endeavour to establish a successful mode of treating canine Hydrophobia has hitherto proved ineffectual, yet all hope of future success should not be abandoned. Perhaps the use of opium with carbonate of potash may deserve attention in this as well as in Tetanus. A decoction of the *Celtis Ambralis* † is said to

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* With a conviction that the faculty will give every assistance to farther the patriotic views of Dr. Bardsley, we endeavour to give additional publicity to those views, by inserting the following queries, to which the author requests answers, addressed to him at Manchester.

1st. Is it not highly probable that Canine Madness in dogs arises solely from the actual communication of the virus?

2nd. Is not a few months the longest period, during which the poison lurks dormant in these animals?

3rd. Does it not appear sufficiently probable, that a proper system of quarantine, extending to dogs within the kingdom, and to such as may be imported, would be the most effectual means of extirpating Canine Madness from the British Isles?

† Probably the *Celtis Australis* is meant, which grows abundantly in the South of Europe, and is sometimes used in Dysentery and Menorrhagia. The extent of the vegetable kingdom makes it often difficult to identify particular species of plants with a correctness sufficient to employ them medicinally, with some prospect of success. This difficulty is certainly felt with regard to the *Celtis Ambralis*. In the last edition of the *Systema Naturæ*, there are six species of *Celtis* enumerated; the *C. occidentalis*, a native of Virginia. (Mill. fig. tab. 88.)—*C. orientalis*, Levant. (Pluk. alm. t. 221. Rheed. Mal. 4 t 40.)—*C. Americana*, West Indies. (Plum. Cat. 18.)—*C. aculeata*, Caribbees (Swartz prodr. 53. obs. 92.)—*C. lima*, West Indies (Swartz prodr. 53.—*C. micrantha*, Jamaica, (Brown Jam. 173. tab. 12, fig. 2). If any of the species of Celtis are indigenous to Spain, it is probably the *Orientalis*), but that is a deciduous forest tree of large growth, not an herbaceous plant, as the account indicates. The *Phytolacca decandra* in the form of the powdered plant, is said to have cured a spasmodic affection following the bite of a rabid dog. The *Phytolacca* is used as a common purge in N. America, and some empirical attempts have been made with it to cure Cancer. It certainly possesses active qualities.

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to have been employed by the shepherds of Andalusia with great success in Hydrophobia since the year 1801; and Mr. Blane has made public a recipe for curing the bite of a mad dog, as used upwards of 150 years at Tring in Hertfordshire, with extraordinary success. Every county in England has some individual who possesses a secret for curing this dreadful disorder; a circumstance that diminishes any confidence that might be given to such nostrums. Still, however, society is indebted to Mr. Blaine for procuring and making public one of them, as affording the means of ascertaining its properties. This medicine, a recipe of which is given below,* is stated by Mr. Blaine to have been very uniformly successful in the prevention of Hydrophobia; and that it produces nausea, giddiness, tremors, and cold sweats; these effects last two, three, or four hours, and leave the person free from all ailment.

The propagation of an Ophthalmia by contagion, originally imported from Egypt, has been farther confirmed by Dr. Vetch; who maintains that it is communicated by no other means than a direct contact of the morbid discharge. This circumstance forcibly marks the propriety of separating the diseased from the healthy. In the army, in manufactories, and in schools, this precaution should be religiously observed. Though the various diseases of the eye have been familiar to British practitioners from the time of Bannister, who enumerated one hundred and thirteen forms of morbid affections of this organ; yet the Egyptian

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* Copy of an original recipe, which has been in the family of John Webb for 150 years.

Take of the leaf and tender bud of rue half a large tea cupful, when cut quite small, the cup to hold about a quarter of a pint, beer measure; take the same quantity of large or tree box, also cut this small; add nine leaves of red sage, cut small; let them be without blemish. Take half a pint of new wheat-meal from the mill, or good fine flower, and about one table spoonful of yeast; mix it together as dough; let it lay about half an hour, then bake or boil it; take one third of it in new milk each morning. This quantity for a man or woman, sheep, hog, or dog: but for a cow, or horse, take one large tea cupful of rue, cut small, and the same of box, but only nine leaves of sage; give this in milk or some other liquid. Half this quantity will do of the rue and box for a colt or calf; but nine leaves of sage. My father, (says James Webb,) has cured some men when mad: then he took one tea cupful of the rue and one of the box, and nine leaves of sage; boil it well in a pint of milk, and give it as quick as possible. Half this quantity of rue and box for a small child; but in all cases neither more nor less than nine leaves of sage.

The rude structure of this recipe proves its authenticity, independent of its being given on oath, by James Webb, the son of John Webb.

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Egyptian Ophthalmia presented phenomena either so new, or aggravated to a degree of violence before unknown, that much diversity of opinion existed as to the most effectual modes of treatment. Cold and heat, sedatives and stimulants, in conjunction with topical and general evacuations, were employed, commonly without arresting the violence of the disease; or, only retarding its destructive termination. Under these circumstances it was determined to push the mode by depletion to a maximum, that should, at least, decide very fully, its powers over this local inflammation. The event was fortunate. A use of the lancet, free beyond precedent in modern times, was found to keep in subjection this formidable, and under milder treatment, this unmanageable disease. The abstraction of thirty, forty, fifty, or even sixty ounces of blood from the system, was found to suspend the morbid action, and prevent the disease arriving at its second stage.

If enthusiasm is to be indulged in any branch of science, perhaps it is in natural history, and in the pursuit of Botanical Inquiries. What has led the philosopher of Europe to traverse the wilds of Africa, to explore the forests of the American continent, to contend with the stormy seas that surround the capes, or to brave the eternal frosts of the polar circles; to investigate nature in her remote and inhospitable climes, where peril in every form attends on his progress, but that enthusiasm of soul which impels to the endurance of privation, and to the encounter of danger? To Linnæus, Park, Vaillant, Cook, Bruce, is science indebted for facts which support its principles, adorn its details; give interest to its investigations, and conviction to its doubts. If the traveller, who pursues his discoveries, frequently at the hazard of life, deserves a distinguished place in the temple of science; no dishonourable station among those who have laboured for the advancement of knowledge, will be allotted to the patient scholar, who in his closet arranges the materials, and moulds into system the fugitive facts that have been collected in the wilderness, on the bosom of the ocean, in the recesses of the mine, on the summit of Mont Blanc, or the stupendous heights of the Cordilleras*.

Among those who have deserved the thanks of society for this labour of arrangement, this generalization of facts, the

* In this vast mountainous chain, which stretches from Carthagena to the straits of Magellhan, there are some points of immense height. Chimboraço is 19,320 feet above the sea, and El-Corason, the highest which has been yet ascended in America, is 15,220.

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the president of the Linnæan society, holds a distinguished place. But chiefly are we indebted to him for his philosophical views of Botanical Science, and particularly in 1807, for an introduction to philosophical and systematical Botany; an elementary work in which the first principles of this delightful branch of natural knowledge are divested of their forbidding aspect, made to interest the feelings, and awaken the curiosity. Those who have felt the consolation that Botany affords in the retirement of the country; and in the solitary stations often appointed to genius, will acknowledge how much they are indebted to the talents of Dr. Smith, for the elucidation of a science once, but now no longer difficult. To the student in medicine, and even to those who think the days of study passed by, this introduction cannot be unacceptable. The ignorance of physicians and apothecaries in Botany, is enumerated among the obstacles to the improvement of the medical art. Ignorance, at least of the indigenous plants, of their classification in systems, of their medicinal properties, or of their poisonous effects, is unpardonable in those who profess to have studied and to practice the healing art. The study of Botany seems peculiarly appropriate to the practitioners in medicine who reside in the country, and who should reflect that there are many plants in the British Islands, whose powers remain unexplored; and that it may be the lot of some fortunate individual to discover the virtues of unnoticed species, and, perhaps, to develope some new property in the vegetable kingdom. But few years have elapsed since Digitalis was no otherwise known than as one, and perhaps the least efficient ingredient, in an ointment for strumous ulcers. An accident led Withering to an investigation that has brought into use a remedy of peculiar and of astonishing powers*. The subsequent labours of Darwin, Ferriar, Fowler, &c. have taught the practitioners of medicine to know in it, the most powerful moderator of the action of the heart and sanguiferous system.

Dr. William Hamilton, availing himself of the opinions and discoveries of preceding writers on this plant, to which he

* This medicine may almost be said to be possessed of a charm for allaying the inordinate action of the heart and arteries; and in this point of view, as well as for its efficacy in some kinds of dropsy, particularly hydrothorax, its introduction into medicine is one of the greatest benefits our science has received in modern times. Currie's Medical Reports, Vol. ii. p. 419.

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he has conjoined no inconsiderable experience of his own, has given a view of its medical history, and its cultivation; of its utility in hydrothorax, and other effusions of water into the cavities of the chest; in phthisis pulmonalis, hæmorrhage, scarlatina, and measles. The investigation of its powers over these diseases, is preceded by a review of whatever has been written upon it for the last thirty years.

The action of Digitalis upon the systems of some animals* is very manifest: yet the laws by which its operations are governed, are so obscure in some, if not in many instances, that an inquiry into its properties and its effects, still excites peculiar interest. We are taught that when used internally, it diminishes the irritability of the system, it decreases the frequency of the pulse, and increases the action of the absorbents. Withering, however, observed, that with persons of tense fibre, of great natural strength, labouring under ascites or anasarca, the Digitalis seldom succeeded; and that, on the contrary, when the pulse was found feeble or intermitting, the anasarcous limbs and body soft and yielding, the countenance pale, and the skin cold, the diuretic powers of the plant were conspicuous. These observations, as far as they concern ascites and anasarca, are confirmed by Dr. Hamilton. In the hydrothorax, however, he found the Digitalis succeed in the opposite state of the system.†

It is also asserted, that in pneumonic inflammation Digitalis cannot be depended on till the tone of the system has been much reduced by previous blood-letting. The same difficulty obtains in phthisis, in proportion to the inflammatory disposition of the vessels.‡ This apparent contradiction

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* Rabbits feed on the green leaves of the digitalis with impunity.

† Dr. Hosack, Professor of Botany in Columbia College, says, In the 1st. or inflammatory stage of phthisis P: digitalis was useful in removing pain and soreness of the chest, in lessening the frequency of the cough, in facilitating expectoration, and in diminishing febrile action in general; but in the advanced stage, it sunk the strength of the patient, destroyed the appetite, and in all respects increased the violence of the complaint. In one case of incipient phthisis, preceded by hæmorrhage from the lungs, it operated like a charm in relieving the patient from some of the most formidable symptoms of the *inflammatory stage*. Digitalis will also probably be found a valuable medicine in the treatment of most inflammatory complaints, and may be no less useful in pleurisy, peripneumony, or inflammation of the brain, than in the *first stage* of phthisis. *De Lile's Inaugural Dissertation.*

‡ Dr. Sanders, in a recent publication on pulmonary consumption, contends that digitalis *is a powerful stimulant, that it increases the strength and*

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diction requires further illustration. If Digitalis diminishes the frequency of the pulse, and lowers the irritability of the system, it might be supposed by those who are not in the habit of pushing refinement to the verge of obscurity, that it would, at least, be a useful auxiliary to bleeding, and other evacuants. Yet is it urged, that the use of this vegetable, the most remarkable property of which is its power of diminishing the action of the heart, is inadmissible, until the diseased action connected with the inflammatory diathesis is first reduced by bleeding. So much at variance are opinions with respect to the action of Digitalis, as well as of the proper state of the system for its successful exhibition, that much remains yet to be done for a full and clear developement of its powers. So certain, however, is it that digitalis is not one of those inert substances upon which investigation is thrown away, that the faculty are called upon to ascertain positively its properties, and to discriminate the diseases and the states of the system in which it may be useful, with a determined precision that will set this contrariety of opinion at rest.*

The utility of botanical studies is not confined to the *materia medica*. The elucidation of properties in plants applying to domestic œconomy, is not altogether foreign to the views of the medical practitioner: and it is his peculiar province to detect the poisonous principle that exists in many vegetables; to point out the appearances that indicate this virulence, to describe the symptoms that arise from its application, and to supply the means of cure. The detection of poisonous plants, has been thought an object of such importance by the Imperial Academy of sciences

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and frequency of the pulse, and if continued sufficiently long, produces flushed face, head ache, hot skin, restlessness, and all the symptoms of febrile action.

* A fact stated by Dr. Baildon in the Edin. Med. Journal, July, 1807, may assist in explaining from whence has arisen the diversity of opinion on the action of the digitalis. This gentlemen observed in his own case, and repeated the experiment a great many times, that after the digitalis had taken effect, *his pulse was not lessened in frequency when he stood erect*; it was then upwards of a 100. When he sat down, it fell considerably; when lying on his back, it fell much more. Thus, during the time it was at 40 when lying, it was about 75 when sitting, and above 100 when standing. Dr. Baildon found the pulse to vary in this manner in all the patients to whom he gave the medicine in any extent. This is a fact of the most interesting practical nature in the medical history of digitalis; and calls for that minute attention on the part of the faculty, that shall either establish it as a principle in the exhibition of this powerful remedy, or reject it as one of those accidental effects that arise from inexplicable causes.

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sciences at St. Petersburg, that it has offered a prize of one hundred Dutch ducats for the best memoir describing the easiest and most certain method, by which any individual not having a knowledge of Botany, may detect venomous plants, in a short time, at a small expense, and in a manner perfectly decisive.

The general opinion that deleterious plants have a lurid and poisonous aspect, denoting their qualities, though sometimes true, is subject to many exceptions. The *Prunus Lauro cerasus, Lin:* remarkable for the beauty of its leaves and the elegance of its flowers, is poisonous; the numerous and beautiful genera of ranunculus and anemone, are for the greater part noxious. The black, shining fruit of the *Atropa belladonna* has been frequently fatal; and the roots of the *Conium maculatum* have been eaten for parsnip, and have occasioned singular derangements of the nervous energy, sometimes ending in death. The *Oenanthe crocata,* perhaps the most active of the vegetable poisons, has nothing in its appearance that forbids its being mistaken for some semi-esculent plant. There are many instances of its having thus been fatal. As there are many plants of inviting exterior possessing noxious qualities, there are also several whose appearances indicate, according to the common notion, venomous properties, which in reality, are not merely innocent but useful. The *Arctium lappa,* the family of *Chenopodiums,* the *Solanum tuberosum,* and *Capsicum,* have this deleterious exterior. The *Sison inundatum,* the *Phellandrium aquaticum,* and other umbellate plants growing in marshes, have been stigmatized, perhaps unreasonably, as poisonous. The *Sison inundatum* is, however, objectionable from the *Oenanthe crocata* having been taken for it: and the *Phellandrium aquaticum* is at least doubtful. It is fatal to horses; but this possibly arises from the *Curculio paraplecticus,* which inhabits its stem, being eaten with it. The criteria distinguishing poisonous agarics, are yet indeterminate: and the repugnance of animals to pernicious plants, is under a similar ambiguity. The avidity, and the impunity with which rabbits devour the *Digitalis purpurea,* noticed in a preceding page, affords a striking instance. The pleasant or the disagreeable odour of plants is no less fallible. The pernicious, and sometimes fatal, effects of the perfume of the lilly is well known; and the odour emitted by the *Crocus sativus,* though not in the least disagreeable, is found under certain circumstances of accumulation, to occasion serious soporific effects. M. Sage, a member of the French National

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National Institute, describes these effects, as occuring in the *Gatanais*, one of the former provinces of France, where this plant is cultivated in great abundance. "The farmers after collecting the flowers of the saffron in the autumn, carry them home and spread them on linen sheets in their houses. In the evening the females are employed in picking off the pistils, the odour from which produces the most alarming effects on the nervous system. The disease thus induced is vernacularly termed the sleepy fever; it never appears but during the saffron harvest, which usually lasts a month. The narcotic effect of this odourous emanation greatly resembles that produced by opium, and in feeble persons and children it is capable of occasioning death. Like the affection induced by opium, it is best remedied by the employment of vinegar." In some cases, where the torpor has been so great as to resemble death, recovery has been effected by friction, and the application of flannels wet with the acetous acid.

The National Institute of France has this year been much employed on botanical investigations. M. de Beauvais, * M. de Candolle, and M. du Petit-Thouars, have signalized themselves on this subject. The first of these gentlemen has particularly attended to the fructification of a class of plants, whose organs are so minute and concealed, that Linnæus arranged them under a class to which he gave the term *Cryptogamiæ*. M. Beauvais has been so successful in his investigations of this obscure subject, that he thinks himself entitled to give to the Linnæan class *Cryptogamiæ*, the new term *Œtheogamiæ*. Messrs. de Candolle and du Petit-Thouars have attended particularly to the physiology of plants, and to the *Materia Medica*. In memoirs, presented to the Institute, they have investigated the structure, and explained the functions of plants; and have added to the catalogue many new genera. M. du Petit-Thouars has began to publish a Flora of the island of Madagascar; and M. de Candolle, beside distinguishing the various plants confounded under the name Ipecacuhana, has made considerable researches into the agreement in the virtues of plants of the same natural family; and has explained, according to new views,

* M. Palisot de Beauvais now occupies the place in the botanical class of the French Institute, formerly filled by M. Adanson. M. de Beauvais is as well known by his travels in Africa and America, and the floras which have been their result, as by his researches on cryptogamous plants.

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views, the rules to be followed in these inquiries.* Every country which has at all attended to the science of medicine, has been sensible of the great advantages resulting from some principle pointing out the similarity of properties, that reside in the individuals of every natural family.

At Ratisbon, the first number of a collection of poisonous plants engraved on stone, has appeared. The prints resemble, and are equal to, well executed wood cuts. This number contains ten prints, with the generic and specific characters annexed. The Napellus acon: the Anemone pratens: Caltha palust: Delphinium staphysag: Helleborus fœtid: Helleborus nig: Ranunculus flam. Ranunculus ficar: Ranunculus acris, Ranunculus scelerat: are delineated with sufficient accuracy. The author of this work, Mr. Keyser, has attached a chapter, explaining the methods of discovering an accumulation of mephitic gas in any situation, and pointing out the best means of dissipating it with safety. Among the literati of Germany, who are constantly employed on objects of laborious research, of wild speculation†, or of heated imagination; it is a circumstance of great gratification to observe a person of the highest rank in society, engaged in the service of science. The Arch Duke John of Austria, is at this time employed on a grand botanical work, in which is given a description of a great number of plants hitherto unknown; of which specimens have been found in the Tyrol, in the county of Saltzburg, and in Lower Austria. Some sheets of this work, ornamented with a great number of plates, have appeared; but booksellers are not permitted to sell them: the Royal Author destines the whole impression for his particular friends, and persons distinguished in science.

The spirit of botanical investigation and discovery has spread from the southern parts of Europe to the extre-

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* M. Decandolles *Essai sur les Propriétes Medicales, des Plantes, comparées avec leurs Formes exterieures et leur Classification Naturelle, 4to. Paris*, 1806, we recommend as an ingenious exposition of a subject which has excited the attention of Camerarius, Linnæus, Jussieu, Vogel, Gmelin, Platz, &c. &c.

† The wild notions of Gall, of which we gave last year a short analysis, have fallen into that neglect and disrepute, which we then predicted must happen. The account of his theory of physiognomy, as founded upon the anatomy and physiology of the brain, and form of the cranium, with critical strictures, by the celebrated Hufeland, has been translated from the German into English this year; and has had a direct tendency, notwithstanding the bias of its ingenious author, to overthrow the system, by making it more known.

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mities of the north; at the same time that the Spanish government is encouraging the study of botany in its dominions in South America, the Emperor of Russia is extending the knowledge of this science, by sending *M. Redowski* on an extensive botanical tour to the most remote north east districts of Asia, including the islands between Japan to the southward, and the coast of North America to the eastward. The botanists who are occupied in the completion of the Flora of Peru, have presented to the Spanish government, eleven drawings, perfectly executed and coloured from nature, on the spot, of so many new species of Quinquina, which were sent to Spain from Peru in the month of January this year, by Don Juan Tafalla, and Don Juan Mazanilla, both eminent naturalists. If the above are in reality new species, and not simply varieties, we have now drawings and descriptions of twenty-nine species of Quinquina. Thirty additional new species are still expected to arrive; and which, it is understood, have been long known to exist in Peru. In the United States of America it is not surprizing that a spirit of botanical inquiry, and a lively application to natural history, should exist in a very marked degree.* The boundless Flora of that country, the undescribed forms of animal life that probably exist in its almost interminable forests, excite to exertions which the naturalist of Europe is not called upon to make, but when he visits these remote and uncultivated regions. The hope of seeing and describing something that has not before been seen or described, is a feeling common to all mankind. On this immense continent this laudable desire may be gratified to the point of satiety. If the unwieldy Mammoth † is no longer to be found in a state of animated existence, the chasm which his

* Dr. David Hosack has established a botanic garden at Elgin in the vicinity of New York, upon an extensive scale, and which from its local advantages, promises to add very extensively to the present stock of botanical knowledge. From this garden, and from the exertions of Dr. Hosack, who is Professor of Botany in Columbia College, an extensive exposition of the Flora of the American continent may be reasonably expected. It was established in 1801, and from the catalogue published last year, it appears that it already contains 2000 species. A garden similar to the above is about to be established near Boston, and connected with the University of Cambridge; another at Charleston, South Carolina; and a third in New Jersey.

† A complete Mammoth has been found in a state of perfect preservation, on the borders of the frozen ocean. It was discovered by Schoumachoff, a Tungoose Chief, in the autumn of 1799, in the midst of a rock of ice.

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his loss has occasioned in the chain of life, is probably supplied by creatures as wonderful in their peculiar natures. Thousands of non-descript plants may be reasonably expected to exist in wilds where the foot of man has not yet trod. The travels of Mr. Ash into the countries bordering on the Mississippi, and which are in a state of preparation for the press, may be expected to supply many new facts and discoveries, both in natural history and antiquities. The course of these exploratory travels lies along the western part of the Allegany mountains to the Mexican gulph, down the Monongahela, Ohio, Mississippi, and other great rivers; and through the Ohio, Virginia, Kentucky, Indiana, and upper and lower Louisiana States.

The interest excited by accounts of remote regions has a very extensive influence: the novelty of customs and manners, the general appearance of countries, and the productions of various climates, are circumstances, however, of different degrees of importance. The principal advantage, perhaps, arising from the travels of individuals, or from the expeditions of discovery in which governments have of late years engaged, is the transfer of the natural or artificial excellencies of one country to another. By this means, the nations of Europe have made the productions of India, of America, of Africa, and the numerous islands of the South Sea their own; and have returned the arts, manufactures, and science of polished life. The catalogue of native British plants, either useful or ornamental, is probably very small. Fruits of every kind, esculent plants, the *Solanum Tuberosum*, and even the varieties of *Triticum*, were foreigners. They are now, however, become denizens; and we are indebted to the President of the Royal Society for observations that may lead to a naturalization of many others. The possibility of effecting this object is clearly proved by the fact of many plants which were formerly kept in stoves, being now raised in the open garden. In annuals this change is effected with little trouble. All that is required is to enable them to ripen their fruit in a comparatively cold summer; after which the hardest frost will have no power to injure the seed. It is more difficult to inure the perennial: for it has to encounter frosts with its buds and annual shoots, that have sometimes been so severe as to rend asunder the trunks of our indigenous forest trees. In 1791, seed of the *Zizania Aquatica* was procured from Canada, and sown in a pond at Spring Grove, near Hounslow. It grew

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and produced strong plants, which ripened their seed; this seed vegetated in the succeeding spring, but the plants produced were weak, slender, not half so tall as those of the first generation, and grew in the shallowest water only. The seed of these plants produced others the next year sensibly stronger than their parents of the second year. In this manner the plants proceeded, springing up every year from the seed of the preceding one, becoming annually visibly stronger and larger, and rising from deeper parts of the pond, till 1804, when several of the plants were six feet high, and the whole pond was completely covered with them. This experiment proves, that an annual plant, scarcely able at first to endure the ungenial summer of England, has in fourteen generations become as strong and vigorous as our indigenous plants, and as perfect as in its native climate. From the facts and observations contained in Sir Joseph Banks's ingenious inquiry, it appears that the most certain way of naturalizing foreign plants, is to sow the seeds of such as occasionally ripen them in our climate, after the example of the experiment with the *Zizania**. Very lately a quantity of the seed of the *Chenopodium Anthelminticum* has been sent from America to Dr. G. Pearson, and will afford an opportunity of attempting, on the principle suggested by Sir Joseph Banks, to naturalize a plant, which is said to be a certain and safe remedy for the human intestinal worm † As there is some doubt of the true species of this *Chenopodium*, it is still more desirable to cultivate it. ‡

The sophistication of parcels of drugs, with substances either inert or deleterious, is to be lamented when accidental,

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* In the Transactions of the Royal Irish Academy there is a paper on this subject by Mr. Templeton, which has since been inserted in the 2d vol. of the Repertory of Arts.

† A newly observed genus of intestinal worm has been described by M. Laennec of Paris, to which he gives the name of *Distomus Intersectus*.

‡ The *Semen Santonicum* of the shops, is said by Saunders, to be the produce of the *C. Anthelminticum*; and this opinion is adopted by Murray, (*Apparat. Medicam. tom. iv.* § 456) who gives a botanical description of the plant. But doubt still exists on this subject; and the circumstance of the seed sent to Dr. Pearson producing the *Chenopodium Ambrosioides*, in no degree lessens the difficulty. Though we are not yet in possession, at least from this source, of the *C. Anthelminticum*, our disappointment is decreased by the production of a plant which Plenck and Mick used with success in the cure of *Chorea*. In Chalmers, (*Diseases of South Carolina, p.* 71.) in Barton, (*Collections towards a Mat. Med. of the United States, part I. pp.* 38—60.) and in Mease, (*Philadelph. Med. Mus. vol.* 2.) additional particulars of the C. Anthel. are found.

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tal, but when it arises from a nefarious intention it deserves to be reprobated in the severest manner. In the city of Hamburgh, a kind of Angustura Bark has lately been sold, that operated as a poison. In some instances in this country, a bark sold for the Angustura, occasioned an approach to syncope, accompanied with tremor and spasmodic twitchings: in other instances it produced the most active spasms. The true Angustura Bark, when good, *is distinguished by having the outer surface more or less wrinkled, and covered with a coat of greyish white, below which it is brown, with a yellow cast: the inner surface is of a dull brownish yellow. It breaks short and resinous. The smell is singular and unpleasant, somewhat like dried fish, (especially when kept close in large quantities) but not powerful. The taste intensely bitter, and slightly aromatic; in some degree resembling bitter almonds, but very lasting, and leaving a sense of heat and pungency in the throat. In powder it is not unlike Indian rhubarb. It burns freely but without any particular smell. In infusion, two drachms to two ounces of boiling water, it does not form a black precipate with a solution of sulphate of iron, and gives a yellow die to linen.*

The spurious sort differs from this in having a thicker and more pithy external coat, generally whiter, with spots of a ferruginous appearance; beneath which it is of a light brown or ash colour, often verging to grey: it has no peculiar smell, but the taste is intensely and nauseously bitter, remaining a long time about the root of the tongue. The infusion immediately forms a black precipitate, and merely gives a slight tinge to linen. There is no doubt but this spurious sort, sold under the denomination of East India Angustura, is really the bark of the *Nux Vomica tree;* and a strong decoction of it given to animals, has occasioned convulsions that in ten minutes have terminated in death.

The Report of the Royal College of Physicians of London, on the subject of Vaccination, affords the most prominent feature in the history of this discovery during the year 1807. On this Report various opinions have arisen. It appears, however, on the face of it, to be composed with a serious regard to truth and candour, and with a reverence for science, in these flippant times, singularly commendable. In its detail, it is clear, manly, and judicious, producing every fact for Doctor Jenner's discovery that a dispassionate inquiry can warrant; and facilitating, on the most rational grounds, a remuneration from a grateful country to a distinguished benefactor of the human race. Concise and perspicuous, compressed but free

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from obscurity, there are in it particular positions, which cannot be too often repeated.

It is stated in this Report, that Vaccination is, in general, perfectly safe; the disease excited by it is slight, and seldom prevents those under it from following their ordinary occupations. It has been communicated with safety to pregnant women, to children during dentition, and in their earliest infancy. The security derived from vaccination against the small-pox, if not absolutely perfect, is as nearly so as can, perhaps, be expected from any human discovery; for among many thousand cases, with the result of which the College have been made acquainted, the number of alleged failures have been surprisingly small, and form no reasonable objection to the general adoption of the practice. The testimonies before the College of Physicians are decisive that Vaccination does less mischief to the constitution, and less frequently gives rise to other diseases than the Small-pox, either casual or inoculated. The College states this the more strongly, because it has been objected to Vaccination that it produces new, unheard of, and monstrous diseases. Of such assertions, no proofs have been produced; and after diligent inquiry, the College believe them to have been either the inventions of designing, or the mistakes of ignorant men. In its mildness, its safety, and in its consequences, the individual will find the peculiar advantages of Vaccination. The benefits which flow from it to Society, are infinitely more considerable; it spreads no infection, and can be communicated only by inoculation; in all respects, it possesses material advantages over inoculation for the Small-pox. The most forcible argument against inoculation for the small-pox, arose out of the actual increase of deaths from the casual disease, since its introduction. From this objection Vaccination is completely and absolutely free.

These are conclusions from a body of evidence, taken by persons most competent to judge of its credibility as to the fact; and from education and habit, most decidedly master of the subject, as physiologists and practical physicians. When a corporate institution, placed in the most conspicuous station of science, who has to answer to the world for its opinions, and who is certainly neither the partizan of the speculative philosopher, nor the trading projector, pronounce in favour of a discovery, there are few unprejudiced persons who will not admit the force of its decision.

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It has now become desirable to all nations, to ascertain with the utmost precision the natural phenomena of a morbid affection, so mild in itself as the vaccine disease, and yet possessing the astonishing property of freeing the constitution of its susceptibility for the small-pox. It is scarcely, however, a secondary object in this inquiry, to discover and promulgate the most certain and effectual mode of preserving the vaccine virus in an active state, for a length of time, and during a removal to distant regions. The promoters of vaccination have been laudably employed on this subject, and various have been the projected methods. Among these, a proposal made in 1802, by Mr. Bryce, to preserve the dried scab of the vaccine pustule, and which he asserted, afforded when moistened with water, an active fluid after a lapse of several weeks, has become interesting from the Report of Mr. Shoolbred on the state and progress of vaccination in Bengal.

The extreme difficulty of keeping up the disease in a very high temperature of the atmosphere, induced Mr. Shoolbred to try a variety of methods for the preservation of the virus. The armed lancet, the impregnated thread, the plain glass plates, the glass plates with a cavity for containing the matter, the thorn, the ivory lancet, and the exhausted tube of M. Giraud, were all tried with various degrees of success; but all of them were found precarious, except Giraud's invention. In these tubes the virus continued fluid as when taken from the pustule for eighteen days; and was believed to retain its infecting quality for a much longer time. But a more simple and perfectly effectual method was resorted to. It was found, that the peculiar scab or crust, into which the vaccine vesicle is gradually converted toward the conclusion of the disease, contains the virus in a dry state, with unimpaired activity, for a great length of time. From one month to fourteen weeks, Mr. Shoolbred ascertained that its activity continued. A piece of this scab bruised on glass or any hard body, with the point of a penknife, in a small drop of cold water, so as to produce a turbid fluid, is the simple method of preparing the dried virus for use. This turbid fluid inserted into the arm, in the usual mode of infecting, is effectual in producing the genuine disease.

Mr. Shoolbred observes, "from the prohibitory cautions of Dr. Jenner, and some other writers, not to take the matter for inoculation after the formation of the *areola*, it might naturally be expected, that, in using the scab at a

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still later period, there would be some risk of producing what they call a spurious disease." But this author, from extensive experience, is satisfied that there is no ground whatever for such apprehension, as he has never seen more perfect vesicles, nor a disease more regular and compleat, in every respect, than that which has been uniformly produced by the scab. This is an inquiry, not of idle speculation or mere curiosity. It is of the first consequence to know, if the disease can, with certainty, be thus propagated; and with positive efficacy as a security against the Small-Pox.

An apparent deviation in Mr. Shoolbred's practice from the principles laid down by Dr. Jenner, for a successful vaccination, renders an inquiry into this subject highly interesting. If it were hazardous to inoculate with virus taken after the areola is formed, how does it happen that Mr. Shoolbred has been so successful with virus, as it seems, of a much more advanced period? Perhaps a more precise knowledge of the structure of the vaccine vesicle may explain this. We have been instructed, that a successful vaccination can only take place when the matter is taken on or before the 9th day; that it should be perfectly transparent; that the punctures should be as superficial as possible, and not more than one made in each arm; and that any excess of inflammation should be immediately repressed by cold and astringent applications. Dr. Adams, whose researches on morbid poisons are interesting equally to the philosopher and the physician, has observed, that it is a most important consideration carefully to avoid using vaccine virus in the smallest degree *turbid*. The character of the true vaccine fluid is a transparency so perfect, that on fine glass, or on the polished point of a lancet, it cannot always be perceived. *To its crystalline transparency* (he says) *there is no exception.* And yet in Mr. Shoolbred's practice, which was very extensive, a *turbid* fluid, procured by rubbing the scab with water, was effective in producing the genuine disease. Notwithstanding this apparent contrariety in a fact or law in the vaccine disease, not much doubt exists but that a due investigation will reconcile the method used in India with the principles laid down by Dr. Jenner*.

Philanthropy

* The mode of inserting the virus in the arm, and the progress and termination of the vaccine vesicle, are so minutely and so correctly described by

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Philanthropy will rejoice to find a discovery promising such incalculable blessings to the human race, supported in the British dominions by the decisive Reports of the Royal Colleges of Physicians of London, of Dublin, and Edinburgh. In other parts of the world, vaccination has met with an ardent, if not a similar support. M. Champagny has presented to the Emperor of France, a report of the present state of vaccination in that country. He had received an order from the government to obtain authentic materials for this report, by inviting the prefects and clergy of all the departments in the empire to transmit to Paris official documents on the subject. It appears from this report that vaccination has met with some opposition from the ignorant in France, in consequence of the translation of anti-vaccinarian pamphlets from the English language. By a royal ordonnance, the King of Bavaria has decreed that every child within his dominions, under three years of age, shall be vaccinated before the 1st of July 1808; and that every infant born in future in his dominions shall undergo this inoculation within three months after its birth. Heavy penalties are inflicted on neglect of this decree, and the inoculation of the small pox is prohibited under pain of imprisonment. Instructions for vaccination, accompanied with engravings, drawn up by the vaccine society of Copenhagen, have been translated into the Icelandic language, by M. Thorarsen. Dr. Anderson, physician general and president of the Medical Board of Madras, has given some interesting facts on vaccination. From the statements of this gentleman it appears, that no serious alarm has been caused by the small-pox in that vast extent of country, now subject to Great Britain, in India, since the introduction of vaccine inoculation; nor has the vaccine matter, though transferred from one human subject to another for four years, produced any other disease. Under the direction of the Presidency of Madras, vaccination has resisted the test of 1500 variolous inoculations. In the same

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by Dr. Adams, that it would be an injustice to the profession not to pointedly recommend his "*Popular View of Vaccine Inoculation*, &c." But while we recommend the whole of this ingenious essay, we cannot refuse to give that sort of publicity to the following fact, which the extensive circulation of the Med. and Phys. Jour. insures. "It is generally thought best to take the fluid before the 8th day; but when this is done *the vesicle from which we take it should be watched till scabbing, for if without other violence than the above puncture the contents should become muttery, or the scab soft, we ought not to depend on the issue of our vaccination.*"

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same Presidency, between September, 1802, and the 31st. of August, 1806, there have been successfully vaccinated 607,895 persons.

But little apprehension can now remain that the discovery of Dr. Jenner, pursued with the mild spirit of philosophy, and explained with truth and candour, will afford the proudest triumph to science, by the annihilation of the small-pox. But while that disease remains we shall, however, be indebted to Dr. Adams for observations that tend to render it more mild than under former inoculations. Dr. Jenner, in his enquiries into the nature of the cow-pox, speaks of a particularly mild sort of small-pox, which spread for some time over Gloucestershire. Of this no other description is given than that it never became confluent; that a given number of cases proved as mild as the inoculated disease; and that the lower class of people so entirely lost all terrors of it, that the usual intercourse was maintained as if no contagion existed. It is suspected, from its universal mildness, that this must have been what nurses call the white sort; the most striking peculiarity of which is, that, contrary to what Sydenham observes, both of the confluent and distinct, the pustules remain white on the face, as well as on the rest of the body, till they begin to scab. In this sort the pustules are never very large, but round and uniform in proportion as the disease is well marked. As they increase, the upper surface extends over the base; and as they dry the scab becomes nearly globular: that is, the whole is distinguishable above the skin, without concealing more of the sphere than what would happen were such a figure actually placed upon the surface. At this time the scab is become of a pale umber, and dries much harder than in the common distinct sort. Its deviations may be defined by the earlier approach of the pustule to yellow, and by the greater softness and inequality of the surface of the scab. By continuing with great caution to inoculate at the Small Pox Hospital, Pancras, from this variety of small-pox, and afterward by selecting those arms which had most the appearance of cow-pox, Dr. Adams at last succeeded in procuring a succession of arms so nearly resembling the vaccine, that a universal suspicion prevailed that one had been substituted for the other*.

In

* This ingenious physician, to whom the profession is much indebted for his faithful observance of the phenomena of a particular class of diseases, has

In the first Number of this Historical Register of the Progress of Medicine, some slight observations were made on the importance of the question respecting the existence of contagion in certain febrile diseases. The year 1807 has furnished additional materials for serious reflection on this weighty point. Two physicians of much eminence have taken opposite sides in the question; and a statement of their opinions, and the facts by which they are supported, will probably give an intelligible view of the subject. Dr. Edward Miller of New York, in a report on the malignant fever which prevailed in that city in the autumn of 1805, has laboured to prove, that *Typhus icteroides* is never disseminated by contagion; while Dr. Gilbert Blane, in a letter to Baron Jacobi Kloest, supports, with equal energy, the contrary opinion.

Typhus icteroides, the subject of this diversity of opinion, was first noticed under the name of *Maladie de Siam*, by the Pere Labat, who resided in Martinique about the end of the 17th century. In 1729 or 30, it was epidemic for the first time at Carthagena in South America, where it received the appellation of *vomito prieto*. About the same period, or a few years before, it appeared in the island of Barbadoes. The first notice of it in North America was at Charleston in South Carolina, in 1732; where it again appeared in 1739, 1745, and 1748. It was first known at Philadelphia in 1762; but did not again return till after thirty years, when numbers of French emigrants took refuge there. Since it has been several times epidemic at that place, as well as at New York, and other towns of North America. It was first observed on this side of the Atlantic at Cadiz, in 1764; and again in 1800. In 1803 it appeared at Malaga; and in 1804 it visited the town and fortress of Gibraltar; spreading the same year to several ports of the Mediterranean, as far as the borders of Valentia; and on the ocean as far as St. Lucar. *

The

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has given, in the work before noticed, very judicious directions for conducting small-pox inoculation, under the following heads:—1st. Season of the year. 2d. State of the person to be inoculated. 3d. Choice of the variolous fluid. 4th. Manner of inserting the fluid. 5th. Treatment of the patient. Those who from opinion or from necessity still inoculate for the small-pox, will be rewarded for the trouble of consulting the work from which the above is extracted, by gaining a clearer view of a disease, which, though wearing out, is yet of serious importance.

* This brief historical statement of the progress of yellow fever in modern times, is collected from documents found in the writings of physicians who

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The mortality which marks the progress of this disease is so extensive, that a clear and distinct developement of its cause, has become not only a subject of anxious solicitude, but of serious importance.

Dr. Miller, in his elaborate Address, asserts that a *pernicious vapour, floating in the atmosphere, is its primary and essential cause; and that the disease itself is absolutely and universally non-contagious.* This he endeavours to prove,

1st. From the locality of the disease.

2d. From its appearance and disappearance at particular seasons; and,

3d. From those about the sick being exempt from the disease, when removed from the impure atmosphere.

The noxious miasmata of putrefaction, exhaled by heat, he considers as the material of this *pernicious vapour.* Its peculiarities are,

1st. That it arises from low and moist grounds, overspread with the corrupting offals of animal and vegetable substances, collected in large masses, or where the process of putrefaction is going on to a great extent.

2d. That it is more frequently and copiously produced, and more highly concentrated in warm and tropical countries, than in high latitudes and frozen regions.

3d. That it is generated more in summer, and operates more powerfully in autumn, than in other seasons of the year; and is uniformly more frequent and virulent in sea-ports, along the sea coast, in plains and near rivers, than in the interior high and mountainous districts.

4th. That it is one of the most universal causes of disease in nature; that, however diversified in quantity or virulence by local circumstances, or by varieties of climate, season, or condition of society, its effects, in one degree or another, are nearly co-extensive with the habitable parts of the globe.

Though this noxious exhalation is stated to be the primary

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who have observed it, at various periods, since the time of Lahat. The American physicians would carry a knowledge of it as far back as the time of Hippocrates; and allege, that even a slight inspection of his works will prove that he had observed it under its most malignant and fatal forms. It has been contended that yellow Fever is a modern disease, and utterly unknown to Europe, except when imported from America. To obviate this imputation, the American practitioners cite Hippocrates to prove its existence in the earliest periods of medical knowledge; Baglivi and Lancisi, as evidence of its occurrence at Rome; and Cleghorn, to shew that it is indigenous in the island of Minorca.

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mary and essential cause of yellow Fever, yet it is admitted to require, generally, the operation of secondary causes to bring it into action. These are, exposure to heat, fatigue, cold, intemperance, fear, anxiety, &c. And it is acknowledged, that the exciting causes, by suddenly producing the disease, are often so striking, as to lead many entirely to overlook the agency of the atmospheric poison.

It is pointed out by Dr. Miller, in a minute description of the local peculiarities of New York, why this noxious exhalation, or poisonous vapour, has been accumulated there to a quantity and virulence, productive, at various periods, of the *Typhus* icteroides. As it is asserted, that this vapour is a universal cause of disease, in every part of the world, it may not be useless to relate, in Dr. Miller's own words, the circumstances that occasioned its poisonous accumulation at New York.

"The city of New York lies in N. lat. 40, 42, 8; W. long. 74, 9, 45; at the confluence of the river Hudson and Long island sound;* and on the southern and narrow extremity of Manhattan island, which is about fifteen miles in length, and from one to two in breadth. The scite of the city, as it originally stood, was very irregular, being broken into hills and declivities, and indented with small rivulets or creeks, skirted with marsh. Many of the hills are levelled; but the marshy grounds, though covered with houses and pavement, are still low and moist. The city is about twenty-seven miles from the ocean, and is washed on both sides with water of great depth, whose current is very rapid, whose tide ebbs and flows about six feet, and which is nearly as salt as that of the neighbouring sea. On both sides of the city, considerable encroachments have been made on the water by artificial ground, the whole extent of which, may be computed at not less than 192 acres. Of this, 90 acres lie along the East river, and 42 along the Hudson. The portion of it on the East river, forms that part of the city, where malignant fevers have always first become epidemic, and chiefly prevailed. The wharves and docks are constructed of logs and loose stones. All the fresh water used by the inhabitants is procured from wells within the city, and is now become extremely impure. The population of New York may be estimated at about 76,000. The sources of pernicious exhalation

* The East River.

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halation in this city, are unhappily very numerous, and difficult to correct. The modes of constructing the wharves and slips, would almost induce the belief that they had been designed for the repositories of filth, and nurseries of disease. The *made ground* on the East river, is pregnant with almost annual pestilence. Originally composed of the most corrupt materials, from its relation to the river, and the condition of the wharves and slips, it must constantly remain moist; from its surface being nearly level, it receives and retains the collected filth washed down from the higher grounds: and beside this, the offensive and putrid matter, which a crowded population must necessarily deposit, and which already underlays a great proportion of this part of the city, incessantly augments the mass of corruption." It can be no matter of surprize, Dr. Miller further observes, that the scorching heat of summer, operating on the complicated pollution of this ground, formed of an aggregate of nuisances, and still the receptacle of numberless others, should exhale poison and death into the atmosphere which stagnates over its surface.

Having pointed out the peculiar atmospheric poison that is said to produce this dreadful epidemic, the circumstances that induce its local accumulation, and some of the laws by which it is governed, we *seem* to have arrived at a determinate and fixed point, in accounting for the source and origin of yellow Fever. This alleged source of the American epidemic, Dr. Miller further supports, by stating under several positions, the reasons for not admitting its propagation by contagion.

After some general remarks on the laws governing contagion, and their operation in Small-Pox, where they are more distinctly ascertained than in any other disease; he proceeds to observe, that the agency of contagion, in the propagation of the malignant American Fever, is rejected, because,

1st. No relation is observed between the source of the pretended contagion, and the spreading of the disease to individuals or families.

2d. The pretended contagion is admitted to produce no effect in the climate of America, except in particular situations, and a particular season of the year, when an impure and noxious atmosphere is said to exist.

3d. It is admitted that the disease does not spread, when the sick are removed from the impure air in which it was contracted.

4th. No

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4th. No communication of the disease was ever observed in yellow-fever hospitals, situated at a small distance from the cities to which they belong.

5th. The extinction of the disease by cold weather, is an insuperable objection to the doctrine of its propagation by contagion.

6th. Yellow fever does not prevail in countries where the heat is not sufficient to exhale the miasmata of putrefaction, in the requisite quantity and virulence.

7th. In no instance did those persons who contracted the disease at New York, and died in distant towns and villages, communicate the fever by contagion.

8th. Among the earlier cases of the disease, which were, as usual, most virulent, very striking examples of its non-contagiousness were displayed in some of the most crowded quarters of the city.

9th. The universal exemption of the physicians of New York, amounting to fifty or sixty persons, from the disease, is irreconcilable with the doctrine of contagion.

10th. The failure of every attempt to arrest the progress of the disease, by separating the sick from the well, is also incompatible with the doctrine of contagion.

11th. The inconsistency and contradiction which constantly attend the application of the doctrine of contagion in this disease, make it altogether inadmissible.

If Dr. Miller has not been completely successful in proving that *Typhus icteroides* is the progeny of a *pernicious vapour being the noxious miasmata of putrefaction exhaled by heat*, he very forcibly states the objections to the doctrine of contagion.

The Supreme College of Medicine at Berlin, having offered a Prize for Essays on the nature of the Contagion in Yellow Fever; Dr. Blane, though not as a candidate, addressed some observations to Baron Jacobi, on this obscure subject. The object of the Prussian government was to ascertain the probable danger of this disease making its way into the Prussian territories; and Dr. Blane, by stating some laws by which it is governed, plainly shews the improbability, if not the impossibility, of its spreading to the northern states of Europe.

It is an extremely curious fact in the history of the Plague, that a degree of atmospheric heat below that of the tropical, and above the point of congelation, is essential to its existence. That the cold of winter and the heat of summer are equally inimical to it. Between this fact and a law in *Typhus icteroides*, there is a striking analogy; with

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with this difference however; the Yellow Fever exists only in tropical heats, and the Plague in a temperature of the atmosphere, between the heat of summer and the cold of winter. This fact in the history of the American epidemic affords a security to the northern parts of Europe, both against its introduction by contagion, and its spontaneous origin from the pernicious vapour of putrid swamps.*

On the subject of this address Dr. Blane has endeavoured to establish two important points.

1st. That the Yellow Fever is contagious.

2. That this contagion is limited by its being a *sine qua non* to its efficiency, that the therm. of Farenheit should be at, or above, 80; and that the effluvia from living human bodies should be in a certain degree of concentration.

The first of these propositions he supports by the recital of a number of facts, authenticated by having come under his own observation, or given on respectable authority. The first of them is the communication of the disease to the Thetis and Hussar frigates, from two French armed ships, taken on the coast of America, in May 1795.

In the month of August 1800, a vessel, on board of which some persons had died of the yellow fever in the passage, arrived at Cadiz. After her arrival, the whole crew, passengers, and pilot, were put on shore, and died of it. The contagion, which spread with such desolating effects, over Cadiz, and some other neighbouring towns, was traced to this source. A French ship from the West Indies brought it to Malaga, in 1803;† and the infection was carried from Malaga to Gibraltar.‡

In 1792 it appears to have been imported to Philadelphia by some French emigrants who took refuge there; and Dr. Lind

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* "Different species of infection are regulated by different laws. The small-pox propagates itself in all seasons, climates, and situations. The plague cannot exert its virulence but under a range of heat above the 60th, and below the 80th degree of Farenheit's thermometer. *The yellow fever never spreads but under still higher degrees of heat, and in situations where the air is contaminated by human effluvia.*" BLANE.

† After disappearing at Malaga in the winter, it reappeared the summer following, which is the only instance Dr. Blane has met with on record, of its prevailing two years consecutively in a temperate climate.

‡ The identity of this fever has been ascertained at Cadiz, by the description of it in the gazette of Madrid; at Malaga, by the description of Dr. Arejula; at Gibraltar, by the accounts sent from thence by the medical attendants of the army; and at Leghorn, by the description of Dr. Palloni.

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Lind mentions, on the authority of a sufferer who survived the fever, that it was carried to that place by the clothes of a person being returned to his family, after he had died of this fever at Barbadoes.

The second proposition is also supported by a relation of facts. There is no instance, either in North America or in Europe, of the *Typhus icteroides* appearing except where the temperature of the atmosphere rose to the 80th degree of Farenheit's T. or of its surviving when the heat declined below that point. When it appeared at Gibraltar in 1804, the autumnal heats were greater than had been known at any former period. It has never been known to prevail, but where the effluvia of the living human body existed in a certain degree of concentration; it has never spread into the country among villages and single houses.

From a full view of the subject, Dr. Blane concludes, that *Typhus icteroides is contagious*, because it is known to arise, both in ships and on shore, where men were not exposed to any corrupted exhalations of the soil, nor to pernicious vapours of any kind, except such as proceeded from the contaminated effluvia of the living human body. But that it is limited in its desolating effects, by being confined within certain ranges of atmospheric heat, and requiring, in common with other species of infectious matter, a delicate and casual concurrence of incidents, compounded of internal predisposition and external circumstances, to give it deleterious activity.

The extensive views which Drs. Miller and Blane have taken of this epidemic fever, leave still a doubt of its immediate cause.

It is inconceivable that the permanent source alledged by Dr. Miller, and arising out of fixed localities, as at New York, should so seldom produce the disease. How has it happened that the extensive pabulum of disease, consisting of 90 acres of ground, lying along the East River, "*originally composed of the most corrupt materials, and pregnant with almost annual pestilence,*" so rarely produces Yellow Fever? If this proceeds from a long series of years being deficient in the essential degree of heat, let it be shewn by actual registers of the weather, during such periods. Has it arisen from long calms, combined with the high degree of temperature; let it be ascertained, that heretofore such conjunction of calm and heat had not occurred.

For 30 years Philadelphia was free from this visitation. Can it be ascertained that the natural conjunctions of heat and calm were in the year 1792, precisely what they had

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been in 1762; and that in the interval of 30 years, no coincidence of atmospheric influence had arisen to call this pernicious vapour from its putrid resting place?

It appeared at Cadiz twice within an interval of 36 years. Can it be ascertained that in 1764 and in 1800, the heats and calms in the atmosphere of Cadiz were similar; that the exhalations from the earth in those years had the same qualities; that the inhabitants were accumulated in a like degree; that the want of cleanliness in the town was to the same extent; and that in the intervening 36 years no such concurrence of incidents happened? Why has the disease occurred but once at Gibraltar? It is in part answered by the autumn of 1804, being hotter than any other in remembrance. But did the thermometer never stand at 80 and upwards in any other autumn than that of 1804? or were the secondary causes of fear, fatigue, cold, intemperance, &c. more cogent in that year, than in any preceding period? Do the localities of Gibraltar agree with Dr. Miller's first proposition, that "the pernicious exhalation arises from low and moist grounds?"

It seems a natural inquiry, why this pernicious vapour, "the most universal cause of disease in nature," so seldom operates in those countries where *Typhus icteroides* occurs in a most unequivocal shape; and why, from so universal a cause, evident effects are not produced in places affording every collateral circumstance for their generation? These difficulties are all obviated by admitting an imported contagion, at a period when the secondary causes are in full power.

But the statement of Dr. Miller, which proves, that no relation was observed between the source of the contagion and the extension of the disease; that it did not spread but in particular places; that the medical attendants at New York remained uninfected; that persons in the disease did not communicate it when removed into the country, almost forbids the admission of this cause.

Under these opposing theories, each supported by strong facts, each liable to serious objections; the Inquirer after Truth, left in a state of indecision between the Vapour of Dr. Miller and the animal Contagion of Dr. Blane, looks forward to that period when correct registers of the weather shall have fully determined the state of the atmosphere for a series of years, in those places where *Typhus icteroides* occurs, both during the prevalence of that disease, and in its absence. Surely, if Dr. Miller's opinion be just, a proper examination of the atmosphere, aided by the nice discrimi-

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discriminations of modern chemistry, will detect some varieties in the qualities or impregnations of the air, during a healthy or a sickly season. If Yellow Fever is produced by a *pernicious exhalation or vapour floating in the atmosphere*, may it not be reasonably expected, that some of its qualities may be ascertained; at least, that its actual presence may be demonstrated. It seems of such importance to determine the nature of the atmospheric impregnation, existing as the cause of Yellow Fever, that it would, perhaps, be a mark of wisdom in all governments to establish the most rational means of acquiring this knowledge, and enforce their due fulfilment by laws as rigorous as those of quarantine.*

Fevers, generally, have received a degree of attention during 1807, to which they are entitled, from their magnitude among the morbid affections that constantly attend on human life. In an elaborate Inquiry into the seat and nature of Fevers, as deducible from its phenomena, causes, and consequences, Dr. Henry Clutterbuck argues, that the disease consists in a *topical affection of the Brain, founded in Inflammation.* This hypothesis he supports, by a minute investigation of the symptoms of febrile affections, which are all deducible, the author apprehends, from a disordered state of the parts within the cranium. He has met with a severe, but able and acute animadverter in Dr. Beddoes; who, in Researches, Anatomical and Practical, concerning Fever, as connected with Inflammation, shews that disease as frequently to arise from local affections of other parts as of the brain; and that

* The use of the mineral acid gases is pursued on the continent with an energy that argues a conviction of their efficacy. From experiments in the hospital of *Vat-de-Grace*, by *M. Desgenettes*, it appears that the oxymuriatic gas not only checks the propagation of contagious diseases, but contributes to their cure. *M. Pinel* employed it with similar success in the wards of the *Hospital de la Salpetriere.* In Spain the government has encouraged the practice by conferring rewards on those who employ it. A machine, invented by *de Morveau*, has been used, it is said, with desired success in disinfecting air; and the experiments that point out the efficacy of this machine, have also determined the prophylactic properties of the mineral acid fumigations, especially as a security from the *contagion of Yellow Fever.* The physician *Cabanellas* shut himself up, with his two sons and forty-eight other persons, in the hospital at Carthagena, in which a great number of persons had perished by Yellow Fever. After forty days residence, with merely the precaution of using mineral acid fumigation, they experienced not the slightest inconvenience. This is, perhaps, as strong a proof of the noncontagious nature of the disease, as of the efficacy of the preventive.

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the opinion of its arising from topical affection of the brain, if it were just, has not the merit of originality, "having been adopted by Rhumalius, at Nuremberg, in 1624; by Dr. Marteau de Granvilliers, in France; by Dr. Wendelstadt of Wetzler, in 1794; and still more recently by Ploucquet, Professor at Tubingen."

Dr. A. Phillips Wilson, in an Essay on the Nature of Fever, attempts to ascertain the principles of Treatment, by an investigation of the proximate cause. A republication of a small Treatise on the cause of Yellow Fever, and the means of preventing it in places not yet infected, by the once celebrated Thomas Paine, deserves notice for a forcible simplicity of style, and clearness of argument. In an Inaugural Dissertation at Edinburgh, *de Typhi Remediis*, by Dr. Baldwin Wake, the beneficial effects of *Gestation* are enforced both from his own experience, and from facts furnished by his friends. The most remarkable cases occurred from the compulsory removal of soldiers from hospitals in the worst weather. In these instances, the benefit was too manifest to escape notice. In the removal of the sick, in the spring of 1794, from the hospital at St. Gislain to Dendermonde, a journey of four days, many instances of relief from the most distressing symptoms were experienced: and in the most severe weather, with frequent falls of snow, more than one hundred patients, labouring under fever, were removed in open carriages, from Embden to Bremen, with the happiest effects. It was observed that delirium, in particular, was abated. Dr. Wake's observations lead him to conclude, that gestation is, 1st. most beneficial in the last stage of fevers; 2nd. that it should be performed in an open carriage, in order that air may be freely admitted, and that the patient may be amused by a succession of new objects; 3rd. that it should be continued for eight or ten hours daily, till the patient begins to recover. The strong facts related by Dr. Wake, should call the attention of the faculty to this means of relieving some of the symptoms of fever, probably by carrying off a portion of the accumulated caloric. There are few practitioners who have not seen fevers suddenly relieved by means not ascertained or not understood, and which have probably been an exposure to cool and fresh air. To patients who have been shut up in the wards of an hospital, or immured in the hold of a ship, steeped in poisonous effluvia, the "breath of heaven fresh blowing," must always be an exhilarating cordial, and often an effectual remedy.

To the Physicians and Surgeons of the Army and Navy, medical

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medical science has been indebted for many new facts in the history of diseases; for discoveries that illustrate the principles of physiology; and for manifold improvements in the practice of the art. Diseases of certain occurrence, and, heretofore, of deplorable mortality, have their ravages now so subdued, as never to be formidable, as hardly to excite alarm. The condition of the medical department of the Army has been improved to a certain degree; but in the Navy it has arrived at that point of perfect scientific discipline, as almost to insure health in all climates, and at sea, for any length of time. When the Navy of England is, perhaps, the last barrier between the absolute domination of an insatiable usurper, and the remains of the independence of nations, what does not mankind owe to those persons whose genius and industry have, by securing health to our sailors, enabled the British Fleets to keep the sea for almost an indefinite time.

It will afford the highest exultation to the patriot, the philanthropist, and the philosopher, to know that the medical discipline of the fleets of this country has now reached such absolute perfection, as to make it not uncommon for ships to keep the sea for thirty weeks, and return then to port in high health. A three decked ship, in a cruise off Ushant for twenty-nine weeks, lost not a single man by sickness: and another, the Defiance, maintained a station off L'Orient for eleven months; and when she returned to port was again ready for sea in a week. Chacing squadrons perform voyages to the West Indies, America, and Newfoundland, and return to England fit to go into action. In former wars, a fleet could not make a voyage to the West Indies or America without being laid up in port for many weeks with sickness: and the Grand Fleet, after what would be considered in the present day a very short cruise, was detained at Spithead for a considerable time, having filled Haslar Hospital with its sick, and then being compelled to erect tents on shore to receive many which that spacious building could not contain.

In the history of this improved state of health in the English Fleets, we recognize the profound knowledge, the scientific views, and the patriotic spirit of the Earl St. Vincent. His Lordship, when a private Captain, evinced such attention to the internal economy of his ship, as always inculcated and enforced the only means by which sickness can be prevented. But it was not till he acquired the rank of a flag officer that his system operated generally

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on the Navy. Old mariners were then astonished to find the health of a Fleet comparatively greater at sea than in harbour. This truth stands recorded in the fact of the Channel Fleet, consisting of twenty-four sail of the line, when under his Lordship's command in 1800, returning to Torbay, and having occasion to send no more than sixteen men to an hospital, after being at sea near seventeen weeks without a day's fresh provision. The orders issued by his Lordship, and which affected this mighty change, evinced, by their rational simplicity, a perfect knowledge of the subject. They went principally to the establishment of sick berths remote from the healthy part of the ship's company; to enforce attention to cleanliness, not by drenching the decks with water, but by dry-rubbing them with sand and stone; to strict ventilation, and the regular airing of beds and bedding; to adapt clothing to the season and climate, particularly enjoining the use of flannel in the winter, as one means of preventing pulmonic affections; and to the securing a plentiful supply of the native vegetable acid.

THE author of these pages had felt, jointly with many others, that the higher ranks in society had been inattentive to a department of science, on the due execution of which much of the welfare and happiness of social life depended; and had expressed himself with a warmth only to be justified by a sense of the importance of the subject, and a conviction of the benefits that might arise to the community, by giving that patronage to the art of medicine, which an honest exercise of it deserved. By a tribute to the genius and talents of a person of high consideration, not only as the conqueror of our enemies, but as the preserver of the *health, discipline, and strength* of our Navies, he has, however, made the *amende honorable*; and gratified will he be in the highest degree, if each succeeding year shall enable him to record the well directed benevolence, and the philanthropic views of men, from whom the accidents of birth, fortune, and education, demand an earnest exertion for the protection and encouragement of an *art*, the only object of which is the alleviation of HUMAN MISERY.

Princes Street, Cavendish Square,
June, 1808.

TABLES

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TABLES OF THE NATURAL SYSTEM OF MEDICAL SCIENCE, AND OF THE FIRST PRINCIPLES OF THE MEDICAL ART.

PROPOSED BY ALEXANDER WALKER, ESQ.

LECTURER ON PHYSIOLOGY AT EDINBURGH.

THE following Sketch of a Natural System of Medical Science is founded on the strict basis of physiology, and is, I trust, calculated to place, in a new and more interesting point of view, the beautiful relations which subsist between the sciences of anatomy and physiology, and the art of medicine, as well as to lay the foundation of a more rational system of medical practice.—I do not, however, make this statement without a feeling of the utmost deference to the labours of the celebrated Cullen and the more illustrious Brown, the immortal authors of existing systems. Nothing less than a conviction of the truth and simplicity of the system I am about to propose could have induced me to presume to exhibit it.

In it, as I have subsequently observed, it will be seen that all the parts of Medical Science correctly correspond and beautifully flow from each other: while Anatomy is the basis of Physiology, Physiology is the basis of Medicine; the classification of one is applicable to the rest, and all of them at once involve Mineral, Vegetable, and Animal Nature.

A detailed account of this system will shortly be published.

The present Sketch is addressed as a Thesis to my Physiological Class, and to those Medical Gentlemen who may choose to investigate the subject.

To the gentleman who, on the 1st. day of January, 1809, transmits to me a Thesis, exhibiting the greatest number of diseases and of articles of the materia medica, arranged under their respective genera in the Natural System, a Case of Surgical Instruments of Fifteen Guineas in value, with an honorary inscription, will be presented; to the gentleman who exhibits the second greatest number, a Case of Ten Guineas in value will be presented; and to him who exhibits the third greatest number, one of Five Guineas in value will be presented.—These premia will be adjudged by a committee of medical gentlemen.—To prevent the possibility of partial decisions, mottos only, and not the

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names of their authors, must be inscribed upon the Thesis, while these must be accompanied by sealed papers, having the corresponding mottos on their outside, and enclosing the names of the authors. These letters shall not be opened unless they bear a motto, corresponding to the motto of a Thesis, to the author of which a premium is decreed.

As the subsequent Tables, therefore, are intended as Theses, neither individul diseases, nor individual articles of the materia medica, are inscribed under them. In order, however, to render their meaning perfectly obvious, it may be necessary to give one or two examples of this mode of classification: Thus, with regard to diseases, Fracture is, according to it, a disease of the Mechanical Functions, Syphilis of the Vital Functions, and Delirium of the intellectual Functions: Further, under this class of disease, Fatuitas is a disease of Diminished Mental Operation, Mania of Depraved Mental Operation, and Vigilia of Increased Mental Operation; and, with regard to Medicines, Caustic affects the Mechanical, Mercury the Vital, Opium the Intellectual Functions, &c.

St. Anne's Park, Edinburgh,
March 1, 1808.

Division I.

Present State of Medical Science.

I cannot better explain my opinion of the present state of Medicine than by using, respecting it, the language of Lord Bacon, which is, at this moment, as applicable to it, as it was when first written. "We see," says he, "the weakness and credulity of men is such, as they will often prefer a mountebank or witch before a learned physician; and, therefore, the poets were clear sighted in discerning this extreme folly when they made Æsculapius and Circe, brother and sister, both children of the sun.—For in all times, in the opinion of the multitude, witches, and old women, and imposters, have had a competition with physicians. And what followeth? Even this; that physicians say to themselves, as Solomon expresseth it upon a higher occasion; If it befall to me as befalleth to the fools, why should I labour to be more wise? And, therefore, I cannot much blame physicians, that they use commonly to intend some other art or practice which they study more than their own profession. For, you shall have of them, antiquaries, poets, humanists, statesmen, merchants, divines, and

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and in every of these, better seen than in their own profession; and, no doubt, upon this ground, that they find that mediocrity and excellency in their art maketh no difference in profit or reputation toward their fortune; for the weakness of patients, and sweetness of life, and nature of hope, maketh men depend upon physicians with all their defects."

But Lord Bacon has assigned an amply sufficient reason for these circumstances. In another place he says, "Medicine is a science which hath been, as we have said, more professed than laboured, and yet more laboured than advanced; the labour having been, in my judgement, rather in circle than in progression. For I find much iteration, but small addition." Now it is, in reality, this profession without labour, this labour without advancement, so well expressed by Lord Bacon, this iteration without addition, which is the real and sufficient cause (overlooked by him) of the poets so properly making Æsculapius and Circe, brother and sister, and of the world uniformly placing witches, old women, and impostors, in competition with physicians. And again his Lordship, with equal justice, says, "In the inquiry of diseases they do abandon the cures of many, some as in their nature incurable, and others as past the period of cure; so that Sylla and the Triumvirs never proscribed so many men to die, as they do by their ignorant edicts, whereof numbers do escape with less difficulty than they did in the Roman proscriptions. Therefore I will not doubt to note as a deficience, that they inquire not the perfect cures of many diseases, or extremities of diseases; but pronouncing them incurable do enact a law of neglect, and exempt ignorance from discredit."

It, therefore, becomes proper to ascend to the cause of the little success which has hitherto attended medical investigation; and to attempt, by the removal of that cause, to accelerate its progress; and, by increasing the success, to increase the respectability of physicians.

Division II.

Causes of the present State of Medicine.

The grand cause which has hitherto retarded the progress of medicine, has been the total want of a general principle, and this want has arisen from the very low state of physiological theory.

It has ever appeared to me that a sufficient distinction has not been made between diseases as affecting various functions,

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functions, which, to the most superficial observer, seem to be very different in their nature.—It would appear at first sight, that, instead of almost uniformly applying mental remedies to mental diseases, the physician not only does not distinguish what stages and parts of the same disease are mechanical, what vital, and what intellectual, which must uniformly be the case where all the functions are involved; but that he does not clearly perceive such a distinction at all to subsist in any form or combination of disease.

The physician has also failed to attend to a correct arrangement of the various articles of the materia medica, which ought not to be considered merely as stimulant, sedative, &c. but as, in reality, operating upon different functions.

Besides these, there appear to be other subordinate objects of inquiry, which he has hitherto, to a certain extent, overlooked; namely, that medicines seem to be objectionable from the injury which they do to those functions that are the vehicles of their operations, the uncertainty of their effects as influenced by association, the uncertainty of their continuance as dependant on the same and other causes, the difficulty of removing their bad effects, and the injury they do to the intellectual functions, in making man entirely the creature of direct impression, instead of reflection.

These seem to me points eminently worthy of consideration, and the best mode of obviating the objections they involve, is a greater attention to what I should term mental remedies.

Division III.

Mode of obviating the present State of Medicine.

But in order perfectly to remedy these great defects, the cultivation of physiology is primarily necessary. As far as the accumulation of facts go, it has, however, already been cultivated, and that most assiduously. But before these accumulated facts can afford a principle of medicine, they must afford a theory of physiology; and, before they can afford this, they must be arranged according to their relations to each other.

I may here observe, that the sciences alone afford theories; the arts admit merely of principles upon which these reasonings or theories are applied to the wants of man. Thus in every step of their progress, the arts must implicitly depend upon the sciences.

Now

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Now medicine is purely an art, and admits of a principle derived from physiology, by which the theories of that science may be applied to the cure of diseases.

As, however, no general theory of physiology exists, it becomes necessary to inquire what systematic arrangement can be given to its facts as strictly founded on those of anatomy, in order to obtain one. And I know none so unexceptionable as that which I am about to deliver, nor any general theory so rational as the one which results from that arragement. I shall first, therefore, exhibit these arrangements, and then try their applicability to the medical art.

Division IV.

Natural Arrangement of Medicine.

In proceeding to a natural arrangement of *anatomy* and *physiology*, it appears to me an unquestionable point, that it ought to indicate, at a single glance, the dependence of one function upon another. It is upon this principle that I have constructed the natural arrangement which I am about to detail. And a single remark on the arrangements adopted by the most celebrated modern physiologists will, at once, shew the originality of the plan which I propose, and point out the errors of arrangement which I deprecate.

Blumenbach, Chausier, Dumas, and Bichat treat of circulation before absorption, on which it depends; and even before mastication, deglutition and digestion, on which, in general, even absorption chiefly depends.

If the arrangement of Chausier in particular, who, in this respect, is as accurate as any of them, were to be considered as indicating the *relation* and *dependance* of the functions, so absurd is it, that absorption, instead of the cause, would be the result of nutrition, generation the result of absorption, and digestion the result of generation.

ANATOMY, I divide into three parts; namely, that which considers the *Mechanical* or *Loco-motive Organs*, that which considers the *Vital Organs*, and that which considers the *Intellectual Organs*.—Under the Mechanical or Loco-motive Organs, I class, first, the *Bones*, which support the rest of the Animal Structure; second, the *Ligaments*, which unite them; and third, the Muscles, which move them.—Under the Vital Organs, I class first, the Organs of Digestion, the Absorbent Surfaces, and the Vessels which absorb from these surfaces; second, the *Heart*,

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Heart, Lungs, and *Blood-vessels*, which derive their contents (the blood) from the absorbed Lymph; and third, the *Organs of Secretion*, which separate various matters from the blood. Then follow the *Generative Organs*, which, though commonly formed into a distinct class from the Vital, ought not, by any means, to be so reckoned. For, it is evident, that they form, as it were, the sequel of the Vital Organs, being dependant on secretion, the last of the vital functions, and destined merely to propagate Vitality, and to communicate it to a new series of beings.—Under the INTELLECTUAL ORGANS, 1 class, first, the *Organs of Sense*, where impressions take place; second, the *Brain* or *Organ of Judgement*, where these excite ideas; and third, the *Nerves*, where volition results from the last. TABLE I. represents this arrangement.

This is a NATURAL ARRANGEMENT of the Anatomy of Animals, and its peculiar simplicity is illustrated by its involving, in application, that of Minerals and Vegetables, and by its being capable of instant adaption to Physiological Science.

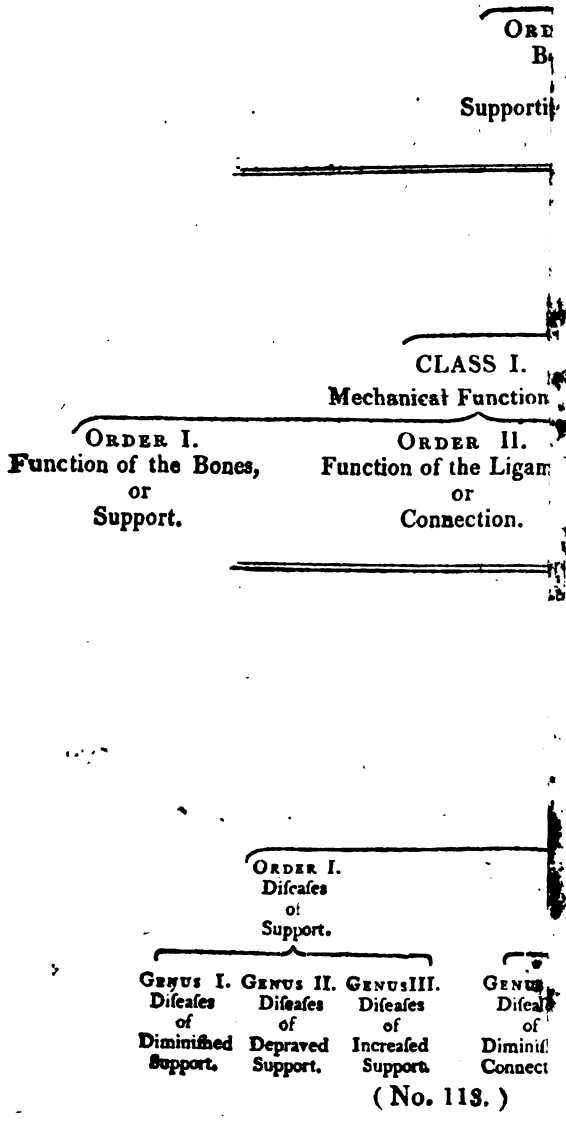
In order to arrange Animal PHYSIOLOGY, it is only necessary to substitute the term "Functions" for "Organs;" and that science will likewise involve, in application, the Physiology of *Mineral* and *Vegetable* Bodies, and be, in its turn, capable of instant adaption to *Medical Science*.

Thus the functions are divided into *Mechanical, Vital*, and *Intellectual*.—The MECHANICAL FUNCTIONS are subdivided into the function of *Support*, the function of *Connection*, and the function of *Loco-motion*. The VITAL FUNCTIONS are divided into the function of *Absorption*, the function of *Circulation*, and the function of *Secretion*. The INTELLECTUAL FUNCTIONS are divided into the function of *Sensation*, the function of *Mental Operation*, and the function of *Volition*. TABLE II. exhibits this arrangement.

A circle of Functions, I may observe, thus exist in Animals, which exist not in Minerals or Vegetables; because volition, the last of the intellectual functions, connects itself to the mechanical functions, by rendering them subservient to it in Loco-motion. Thus the first and the last of these functions are as intimately connected as any of the intermediate ones, and a beautiful circle of organic function and influence is formed.

In

[To Face Page 44.]



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ORDER I.
Medicines
affecting the
Function of Support.

GENUS I.	GENUS II.	GENUS III.
Medicines Diminishing Support.	Medicines Depraving Support.	Medicines Increasing Support.

ORDER I.
Medicines
affecting
Support.

GENUS I.	GENUS II.	GENUS III.
Medicines Increasing Support.	Medicines Rectifying Support.	Medicines Diminishing Support.

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In order to arrange MEDICAL SCIENCE, for the term "HEALTHY FUNCTIONS," the subject of physiology, it is only necessary to substitute the term "Diseased Functions." The Classes of Disease are, therefore, like those of Anatomy and Physiology, three; namely, DISEASES OF THE MECHANICAL OR LOCO-MOTIVE FUNCTIONS, DISEASES OF THE VITAL FUNCTIONS, AND DISEASES OF THE INTELLECTUAL FUNCTION. The ORDERS of the first Class, as affecting the functions of the *Bones*, the *Ligaments*, and the *Muscles*, are three, viz. DISEASES OF SUPPORT, DISEASES OF CONNECTION, AND DISEASES OF LOCO-MOTION. Those of the second Class, as affecting the functions of the *Absorbent*, *Circulating*, and *Secreting* Vessels, are likewise three, viz. DISEASES OF ABSORPTION, DISEASES OF CIRCULATION, and DISEASES OF SECRETION. Those of the third Class, as affecting the functions of the *Organs of Sense*, of the *Brain*, and of the *Nerves*, are also three, viz. DISEASES OF IMPRESSION, DISEASES OF JUDGEMENT, and DISEASES OF VOLITION. The *Genera*, under each order, consist of *Diseases of Diminished*, *Irregular*, and *Increased Function*, as will readily be understood from TABLE III.

This arrangement of disease likewise involves in application, that of Minerals (if we choose to maintain the analogy, and to give that name to mere injury of structure) and of Vegetables as well as Animals. The first would have what might be termed Diseases of Mechanical Structure; the second, Diseases of Mechanical and Vital Functions; and the third, Diseases of Mechanical, Vital, and Intellectual Functions; corresponding to the observation, that Minerals exist, vegetables exist and live, and animals exist, live, and think.

Precisely in the same way would I class the articles of the Materia Medica; first, as operating upon the Mechanical, Vital, or Intellectual Organs, and then as either diminishing, depraving, or increasing their action.—TABLE IV. exhibits an arrangement of them as Noxious Powers; because, in it, their genera *correspond* to the genera of disease. TABLE V. exhibits an arrangement of them as Remedies, because, in it, their genera are *contrasted* or *opposed* to the genera of disease. In the first the genera are arranged under the heads "Diminishing, Depraving*, Increasing;" in the second under the heads, "Increasing, Rectifying*, Diminishing."

By

* It will be obvious, that it is entirely from the want of appropriate terms, that these words are used with considerable latitude.

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By comparing them with the table of Diseases, their use will be obvious.

Division V.

Remarks upon the Natural Arrangement.

The correctness of this arrangement, as strictly founded on physiology, is confirmed by the following observations.

Disease is change of healthy state and healthy action. It is change of state, as well as action, because action depends on state, life itself on organization; and it is only by affecting structure, the objects acting, that change of action can be produced. In fracture, as far as the bone is concerned, the action peculiar to it, Loco-motion, is affected; as the blood vessels are ruptured, their action is affected; as the nerves are injured, their peculiar action is also affected. Thus each has its peculiar actions, and the action of each is affected by means of its structure; but the affection of the state and action of the vessels or nerves, is not, in this case, the primary disease, but only an extension of it to other parts or other functions; or, more properly, they are new diseases, because they affect new functions, and are, in their nature, entirely different.

Now, if disease consists in change of function, different diseases must either consist in different changes of the same function, or in the change of different functions; the former, as being a more minute division, making evidently the genera; the latter, as being more general the orders.

From the inspection of the Table, and a consideration of the nature of disease, it will appear, that whatever is commonly reckoned one disease, is, generally, perhaps always, three; thus fracture is always accompanied by inflammation and pain; and, while the simple fracture is a disease of diminished support, the inflammation accompanying it is a disease of increased circulation; and the pain accompanying it a disease of increased impression.

With regard to the articles of the materia medica, the correctness of my arrangement, as indicating their influence upon the different classes of organs, will, on the slightest consideration, appear equally evident. Caustic, for instance, affects the mechanical, mercury the vital, and opium the intellectual system. But, like the diseases which they remedy, it will appear, that each of these also affects all of the functions, though in a less direct manner than that

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that which I have just now particularly pointed out as its object, and upon which the exact place of each, in a systematic arrangement, ought to depend.

It cannot, therefore, be a just objection to this arrangement that it throws each of what are commonly called diseases under three different classes, as, in reality, each of the common diseases is more properly three, and exists under three natural classes. Even in this way does every physician, though unaware of it, to a certain, though limited extent, consider them; and, therefore, instead of giving any new complexity to nosology, it merely explains and simplifies that complexity which ever has existed in the nature of disease. In other words, it is natural, and developes only the combinations of nature.

Thus no one disease can, with the slightest truth, be said to fall under three different classes, as inflammatory and suppurative phthisis, which are even commonly reckoned distinct stages, or as fracture, inflammation, &c. which are essentially different in their nature, and may be combined in every possible form; thus it can serve no useful purpose to reckon them one, while it destroys every natural arrangement, and all the invaluable consequences dependant on it.

Although, however, nosology must in any thing like a natural arrangement be thus fixed most accurately upon the basis of physiology, the classification of every disease may be derived from the particular derangement of that individual function which occasions the derangement of all the rest, and not from the derangement of all the three functions, which would probably render names uselessly complex.—I say uselessly, because as the whole of any one disease is primarily dependant on the derangement of one function, so health is to be recovered chiefly by the restoration of that function, and the mode of cure is chiefly indicated by the name of the genus under which the disease is primarily arranged. This last is one of the most important consequences of such a system.

If, however, the names of diseases and their classification are not thus made dependant most strictly on *each specific change from* the healthy state described in physiology, they are at once arbitrary and unnatural; the pathology and nosology, of which they constitute a part, has not its foundation in physiology; nor is the practice constructed upon them indicated by the reasonings they deliver.

~~To reckon a series of occurrences which entirely differ~~

in

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in their nature, consequences, and mode of cure, as one disease, may serve the purposes of common language, but by no means those of medical science, or of medical arrangement.

In considering the Natural Arrangement of Medical Science exhibited above, it will be particulary necessary to avoid substituting the term "organ" for "function." Diseases of organs express merely the seats of disease; diseases of functions express their nature. Nevertheless, a reference may also be made to the various organs, as it is evident that there may be disease of the vital, or any other function in a mechanical organ; thus a tumour in a muscle is a disease of Secretion, and an ulcer in a similar situation a diease of Absorption; both being orders of the class, Diseases of the Vital Functions.

Division II.

Results from the Adoption of the System Proposed, &c.

The most valuable result of the adoption of the Natural System is, that it would be possible for the physician to refer to the several columns of a table, each of which, with regard to the dieases which it enumerates, is precisely similar in its nature; indicates, correspondingly arranged, articles of the Materia Medica, and requires precisely similar method of cure.—From it consequently flows the simplest

First Principle of the Medical Art.

This Principle is founded upon a knowlege of the relations subsisting between the various states of the Animal Functions, and of the Powers of Medicines, *as exhibited in the preceding tables;* and it precisely consists in the application of the articles of the different genera of Medicines* to the cure of the *opposite* genera of Disease†.

In this Natural System it will be observed, that all its parts correctly correspond, and beautifully flow from each other; while Anatomy is the basis of Physiology, Physiology, in its turn, is the basis of Medicine; the classification of one is applicable to the rest, and all of them at once involve Mineral, Vegetable, and Animal nature.—This system will, I trust, ultimately shed an useful light over anatomical, over physiological, and particularly over the dark paths of medical science. But it must be remembered,

* As arranged in Table V. † As arranged in Table III.

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ed that this paper exhibits merely a sketch of it, and that sketch necessarily brief, and deprived of every illustration. Yet, I think, I may conclude it by adding the words of Lord Bacon, that "the harmony of a science, supporting each part the other, is, and ought to be, the true and brief confutation and suppression of all the smaller sort of objections.‡"

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following case is copied from a late publication called "Struggles through Life, or the Adventures of Lieutenant John Harriott, formerly of Rochford in Essex, now resident magistrate of the Thames Police; and as we have no reason to doubt the truth of this gentleman's narrative, I think it worthy of a place in your Journal. I have chosen to give it in his own words, as most of your readers, probably, will not have the book at hand to refer to,

Although the propriety of Mr. Harriott's practice, particularly with regard to the cold affusion, now wants no confirmation; it is a striking example, and shews how often we are anticipated, and how often we are outheroded, by amateurs and medical dabblers.

As Mr. H's narrative is so extremely defective in dates, I cannot say precisely when the circumstances here related happened, (as occurring at Bencoolen) but guess, from collateral information, that it must have been soon after the year 1770.

Can any of your readers give us an account of a treatise on the use of water, under the title of "Febrifugum Magnum," by John Hancock, D. D. Rector of St. Margaret's, Lothbury, London, and Prebendary of Canterbury, &c.? and also of "The Curiosities of Common Water," by John Smith, C. M. published 1740, soon after the former?—Perhaps they are well known in the medical world.

P. J. MARTIN.

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‡ Advancement of Learning, Book I.

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"One morning, finding myself exceedingly out of order, two or three hours earlier than my usual time of rising, I was soon sensible, from the excessive burning heat all over me, that one of the same destructive fevers had seized me, which had so rapidly carried off many of the inhabitants. I had noticed the ill success of their medical treatment, and had resolved, in case of an attack, to be my own doctor as long as it was in my power; and I had directed my servant, who came with me from Madras, accordingly.

"I consulted my own sensations as to what I felt desirous of being done; and my predominant wish was, that I could roll myself in snow, as I had seen the American Indians. My head in particular was like a ball of fire; and I apprehended approaching distraction, so as to disable me from giving sound directions. Calling my servant, therefore, who lay in an adjoining passage, I ordered him to throw a handful or two of saltpetre into three earthen jars of water, and stir it as was usual for cooling our wine. As soon as this was ready, I went out, and made him pour the liquor from the three jars successively over my head. I felt instant relief; and wrapping a quilted soosee morning gown about me, lay down again, directing my servant to cover me with other clothes, in the hope of getting into a perspiration, but without effect.

"My stomach and bowels now seemed much oppressed, as if wanting relief. I was always provided with ipecacuanha, jalap, rhubarb, and salts, made up in doses: directing my servant to take two of the former and mix ready for taking, I swallowed this double dose, and, while I laid down again, ordered a tub to be brought to the side of my cot, and some very weak tamarind tea to be prepared. I suffered much before it took the least effect; at length it came with violence, nearly approaching to suffocation; nor was it long after, before it likewise operated downwards. Strong as I deemed myself, I found my strength exhausting very fast, so that I could scarcely turn myself quick enough for the alternate motions, and was at last obliged to order Peter to bring in another tub. I sat over one, and retched over the second, supported by my camp-cot on one side and my servant on the other. How long I kept the two pumps at work I cannot say, but it appeared a terrible long time. When the retching ceased I drank a little mulled wine and water, well chamomed, but had not sufficient strength left to rise and get into my cot without help.

"Weak

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"Weak and exhausted as I was when I laid down, I felt comparative ease; and, after a while, taking a little more mulled wine, I sunk gradually into a sound sleep.

"To make short of my story, I recovered speedily, in defiance of Doctors M'C—— and M ——, who, as soon as the circumstances were known from my servant, while I continued sleeping, declared I had killed myself beyond all power of redemption."

After apologizing for what he calls the rashness of his procedure, and his want of confidence in the regular practitioners, he goes on—

"For several years I had been in the constant habit of having large Cudjaree-pots of water thrown over me in a morning; and hundreds of times, during the violence of the hot land winds on the coast of Coromandel, when retired from company after dinner, finding it impossible to repose on account of the heat, I have seated myself on a camp-stool, in the most likely situation to feel an air of wind in the shade; and with nothing on but a banyan shirt and long drawers, have placed a towel soaked in water upon my head, keeping a second in a pot of cool water close to my side, ready to place on my head as the former one ceased draining; and in this situation have I continued for an hour or two, comfortably reading a book."

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

EVER accustomed to esteem the medical profession as learned, liberal, and philosophical, I cannot help expressing my regret, not only at the asperities which are passing between Drs. Kentish and Wood, respecting priority of title to a presumed *discovery*; but at the unaccountable want of caution in both those gentlemen, in making use of so unauthorized a term. Indeed, I feel paroxysms of perfect astonishment, when reading of our modern medical discoveries! Are these gentlemen, discoverers in the happy predicament of children, who, because their own optics are closed, and the light excluded, suppose themselves invisible? Or do they pay the profession the compliment, to take it for granted, that all but modern reading is confined to themselves and a few others, who, from sympathy,

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will keep their secret? The public at large, indeed, and the *illiterati* of the profession, may be thus attracted, with whom newly coined terms, a laboured elegance of phraseology, and imposing *verbiage*, so totally different from, and doubtless so superior to, the style of old fashioned authors, may well pass for new discoveries in the gross. Whilst speaking of that abundant and studied elegance, always so prolific of meaning, no reader of the medical learning of the present day can possibly mistake me, or mis-apply my remarks.

Dr. Wood says, (No. 112, p. 517) "In 1793 I collected a few ideas on the subject; which, together with some general principles, I published in that year. To exemplify one of the said general principles, I used the following words, "We can apply not only with safety, but with the best effect, ardent spirits to a part burned or scalded." To wave any enquiry as to the precision of this exemplification, with what degree of propriety could Dr. Wood afterwards make use of an "*if*" with respect to discovery? It would be extreme ill manners to suppose Dr. Wood unapprized of the perfect facility with which he could *collect ideas and general principles on the subject*, and also ascertain, from old established practice, that ardent spirits might be applied with safety, and with the best effects, to a part burned or scalded.

Dr. Kentish, I fear, being defective in the necessary caution used by his antagonist, will not be found to stand on so secure ground. Without attempting to question the utility of his publication, or the merits and success of his practice, I must be bold enough to insist, that the following question of his (p. 418) is both rash and unfortunate. Dr. Kentish demands—"Had the ideas of Heister, or of Sydenham, produced any plan or system, which philosophy could regard, as dictated by common sense, until the period when I wrote my Essay?" I shall answer, without hesitation, they had, and that a practice in the case, equally successful with that of Dr. Kentish, has in consequence prevailed in this country for more than a century. To begin with Dr. Harris, a very eminent and judicious practitioner, his success was invariable in the treatment of scalds and burns, even in the eyes, with camphorated spirit. Dr. James recommended the same practice, which may also be found in various publications during the last century, in some of which oil of turpentine is recommended. This system I have myself found *consistent with common sense*, and such as *philosophy could regard*, whence I advised

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vised the practice in one of my publications, ten or twelve years since, but at no rate as a novelty. The emollient is obviously often a needful auxiliary to the spirituous plan. The propriety of internal stimulants must surely depend both on the state of the disease and the nature of the patient's constitution; and cases may easily be supposed, in which the exhibition of internal stimulants must be deemed most temerarious practice; opposite stages of the disease will easily occur, in which such internal remedies will be the first to present themselves to the recollection of every man of medical experience.

The application of cold water to an inflamed surface, although likewise no new discovery, has certainly far greater claims to novelty of practice than the stimulant plan; and the only thing worthy of remark upon the whole of the subject is, that it could possibly afford matter for ten lines of controversy. The philosophy of the subject, including its relation to gout, lies in a nut-shell; and one is tempted to suppose, that none but bewildered, or highly prejudiced intellects, could possibly miss it.

I shall conclude these few desultory observations with the late claim of Dr. ——— to the discovery of the use of nitre in gangrene, without altogether concurring with him as to the stage of the disease in which he applies it. I would rather he had not insisted upon this as a new discovery. The purging salt of Glauber was formerly used with the same intent; and to speak from memory, of things long past, I think nitre also, in the French practice. Some four and thirty years since, in a conversation with certain medical friends at Guy's Hospital, the properties of nitre became the subject, and its extensive use at Bartholomew's, which had obtained ten or twelve years previously to that period, and if my memory has not deceived me, as an external application in gangrene. I repeat not this so much with a view to invalidate the claim of the gentleman above alluded to, as with that of giving a seasonable, and I trust you will think, a necessary caution in the assumption of NEW DISCOVERIES.

I am, &c.

PRACTICUS.

May 23, 1808.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the Journal for June 1808, p. 519, Dr. Wood, in his Reply to my Answer, changes the ground on which I formed my justification; he has now said, his paper was read in September 1792; consequently, it is within the scale of possibility, I might have either heard or seen it. This is evidently what Dr. Wood insinuates. In answer to which, I reply, that I was not a member of the Newcastle Medical Society at that time, consequently I did not hear it read. His paper was written on Typhus Fever, and I shall now assign the reason why I never read it. The remedy he most recommended was the nitrate of potass. In a conversation with the late Dr. Andrew Young, of Newcastle, he ridiculed in such a vein of sarcastic humour, the idea of curing fever with so much debility with this weapon, that I confess myself to have become prejudiced; and when he published his book, my prejudice was so strong that I never read it; at that time I was too much biased in favour of bark, wine, opium, &c. in fever, to give the impartial attention to Dr. Wood's dissertation which every work merits. This confession will explain to my readers, and apologize to Dr. Wood, for my not seeing his work. Laying aside this insinuation of the Doctor's, his answer does not bring forward any proof that his principles had been applied in the treatment of burns. It will appear extraordinary, that Dr. Wood's principles should have produced such an effect upon me, who neither heard nor saw them, and so little upon the secretary of the Newcastle Medical Society, who, I suppose, heard his paper read, and afterwards kept it in his possession; for in 1796, Mr. T. Leighton writes to me thus. "In looking into authors on the subject of burns, I had found various stimulating applications recommended; but never having seen them used, I had not sufficient confidence to try any of them, until you recommended the *fluor volatile alkali* to me, and explained, in a very clear and candid manner, *your* ideas on the subject, and at the same time informed me of the result of your practice: I have ever since that period made use of the fluor volatile alkali, or oleum terebinth. sometimes one, and sometimes the other, and can hardly give a preference to either, both having the same good effects, (vide p. 175, first Essay.) From the above I think I am war-

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rauted in my conclusion, that Dr. Wood's paragraph, "We can apply, not only with safety, but with the best effect, ardent spirits to a part burned or scalded," would have produced no more effect upon the general treatment of burns, than the sentences I have quoted of Heister and of Sydenham. The fact of the cow-pock being a preventive against the small-pox, had been observed in different counties of England; but that did not lessen Dr. Jenner's merit in making public the fact, by which the attention of the rulers of nations was directed to it, and the inhabitants of the most distant parts of the world are likely to be affected by it. The above will shew, that although "some of the first surgeons at Newcastle" took the "*hint*" from Dr. Wood's publication, it had proved no hint to others; and again I disclaim all previous knowledge of Dr. Wood's work, except as a matter of conversation.

E. KENTISH, M. D.

Bristol, June, 14*th* 1808.

History of a Case of the Infantile Disease generally called the PURULENT OPHTHALMIA; *with Observations*; *by* THOMAS MORRISON, *Surgeon, Dublin.*

MUCH time, attention and study are required to advance any branch of human knowledge to perfection; and it seems to be the endeavour of every age, not only to profit by the improvements of their ancestors, but to discover and rectify their errors.

In new-born infants a peculiar inflammation of one or both eyelids is sometimes met with by Practitioners in Midwifery, which has of late years received the appellation of the *purulent ophthalmia*; distinguished from every other species affecting that membrane, by the enormous quantity of yellow matter secreted from the eye-lids, and the extreme swelling thereof. It often appears on the day after birth, but more frequently on the third or fourth day succeeding to that event; and is supposed, by the majority of authors, to arise from the infant being imprudently exposed to a cold atmosphere; yet, many will justly question the above causes, and *others lately assigned*, for this formidable complaint; but careful observers will join with me in opinion, that it is accompanied with such appearances, as to make it manifest to them, that it derives its origin from a different source.

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It frequently happens in this deplorable complaint, that medical and surgical aid is not solicited, until it has nearly run its period, and done every possible mischief: for midwifes, too ignorant to distinguish its real cause, are apt to procrastinate, as confounding it with those simple purulent cases that subside spontaneously in a few days.

The ingenious Mr. Ware, and others, who have written professedly upon the diseases of the eye, entertain no suspicion of this complaint having resulted from a venereal taint. Dr. Edmonston, in his treatise on the ophthalmia, is of the opinion, that it is connected with a loaded and oppressed state of the stomach and intestines; I am ready to allow such an occurrence does often accompany the diseased eye, and, when it occurs, may pretty generally aggravate the symptoms; but the disease in question, I am decidedly of opinion, is produced by a venereal cause: the following circumstance suggested it to me. I was consulted some years ago in the case of Mrs. N's child, who ultimately lost one eye from an attack of this disease. On my first days of attendance, Mrs. N. drew my attention to an affection which existed previous to her parturition, and had continued subsequently thereto; this complaint was unequivocally a case of the venereal kind, which had been suspended in its action by advanced gestation; the coincidence of a similar discharge in the mother and fœtus excited my particular attention, and it occurred to me, that the eyes of an infant, during their passage through a vagina where such a purulent virus was present, would be liable to receive the disease in question by contact between the matter and the eyes of the infant; this; as well as eight cases which since occurred to me in practice, assumed the following appearances.

The disease first announces itself by a redness of the eye-lids, which in thirty-six or forty-eight hours, swell to a size of so great a magnitude as to prevent their being separated without the utmost difficulty; shortly after, a profuse discharge of yellow matter succeeds, which, if the eye-lids can be separated, will be seen to cover and entirely overspread the globe of the eye.

In general, both eyes are attacked in a similar way; and, in obstinate cases, whenever the infant cries, the internal surface of the eye-lids are turned outward, which is also the condition of the parts, when a forcible attempt is made to separate them with the fingers. *This seems most generally the state of the palpebræ*; and though they should be restored by the attendant to their natural situation, yet

yet they do not long retain it, but return very quickly to their former everted state.

In such cases, the tumefaction of the eye-lids occasions a constriction of their ciliary edges; by means of which, the retained matter is prevented from running off, and, its lodging between the eye-lids and the globe of the eye, serves still further to increase the inflammation; and is also one of the frequent causes of obstinate ulcers, staphiloma, and specks, which often partially, and sometimes totally, cover the pupil.

Taking into consideration that the foregoing disease puts on appearances somewhat similar to a gonorrhœa, I was induced to try a practice not very dissimilar, *by ablution and injection*; and I can confidently state, that it answered my most sanguine expectations. My advice in those cases is, to sponge the eyes six or eight times in the day with tepid milk and water, so as to remove the contained matter; and immediately after each ablution, to use a lotion composed of the following ingredients: Take of rose water, eight ounces, dissolve therein two grains of the corrosive muriate of quicksilver, (Pharmacopœia Dubliniensis) well triturated, and add of the liquor of the subacetate of litharge one drachm: it will be also adviseable to inject frequently with a syringe, some of this lotion under the eye-lids. Moreover, I generally combine with the external ablution, a few internal medicines; those which I have preferred, were merely composed of the eighth part of a grain of sub-muriated quicksilver and five of prepared egg-shells, to be administered in a little panado or gruel, each night, to complete the cure.

OBSERVATIONS.

I may be told that this case rests on too slender grounds, to induce the reader to believe that the fact is established in a perfectly unequivocal manner; and that giving such a statement to the world, must tend to disturb domestic tranquillity. Few persons feel more for the peace of the community than I do, consequently, every means ought to be observed, and every care taken, to obviate such difficulty; but as the cause of truth ought to be impartially respected, in giving cases of this nature to the public, I will introduce a few other facts, which must convince the most wavering mind, as to its having a venereal origin, and that the virus became locally applied to the tarsæ, when the fœtus was issuing into the world.

We must beg leave to call to the recollection of the reader, the different effects produced by the application

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of venereal matter to an absorbing surface, and of that same matter when applied to a secreting or mucous membrane; in the former, a chancre and all its train of consequences are produced; in the latter, we find a profuse discharge uniformly takes place, which, in cases of the eye, commonly ends in total blindness; and in gonorrhœa, terminates in gleet, strictures of the urethra, or fistula in perineo.

To confirm the opinion I early entertained of the real nature of this complaint, I was led to adopt a very bold experiment: a little matter was applied, that issued from the eyes of Mrs. N's child, to an abraded surface on the back of the hand of a young surgeon; the result was, a genuine venereal ulcer was produced, and to subdue which, the most steady administration of mercury became necessary. This case was seen by a very discerning professional gentleman, who perfectly coincided with me in opinion, that it was venereal.

Finally, every one of the females who were delivered of the aforementioned children, were fully satisfied of their having received local venereal affections, two or three months before parturition, and were treated accordingly, with the usual success.

To Dr. BRADLEY.

DEAR SIR,

I Am sorry it should be necessary for me to complain of the manner in which you have expressed yourself, on certain passages of my "Hints to Parliament" (see pp. 561 and 562, No. 112, Med. and Phys. Journ.) After quoting a few lines from my book, in which I censure Dr. Walker, and those "*few individuals*" who countenanced his proceedings against the Jennerian Society, you say, "the rancour, virulence, and falsehood" of my language has not been exceeded by "Birch, Rowley, or Moseley." Now, Sir, it is very obvious to me that you have quite mistaken the import of my words, and considered them as applicable to "the founders of the London (Vaccine) Institution *as a body*," rather than to the *few* persons who have acted as Dr. Walker's abettors. I had no design to reflect on those persons in the mass, and have admitted that "*many*" of them are "very excellent and benevolent:" though they may

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may have been deceived by Dr. Walker's contrivances, and unsuspectingly encouraged his illiberal opposition. You have yourself condemned his conduct in some respects, and I am told that he has used even your name beyond what you authorized: surely, then, you will not deny that he might possibly have done many other things of which you were ignorant, and of which he has been publicly accused by the Directors of the Royal Jennerian Society, as well as by several individuals of high rank who do not belong to this Institution.

I felt it due to my own character, thus to offer some explanation on the above subject; but I by no means desire to enlarge, with the view of criminating Dr. W.—And, as to the other point, concerning which you have considered my observations too personal, I can only say, that I very much regret to have let a single passage appear in my book, which can admit of that construction. But, I think it fair to avail myself of the apology I made (at p. 41) in the contemplation of such a possible event; *viz.* "Should a *verbum ardens* escape me during the hurry and rapidity of my writing, too like the envenomed acrimony or bitter calumnies of the author himself (Mr. Birch), you will expunge such words from this letter, and impute them to mere inadvertency." Besides this, I had distinctly expressed the great unwillingness with which I commented on the practice of the "two respectable gentlemen at the Small-pox Hospital."

You will oblige me by giving this exculpatory note a place in the next Number of the Med. and Phys. Journal, lest the severity of your criticism should leave an impression on your readers beyond the measure of strict justice.

I am &c.

W. BLAIR.

Great Russel Street, June 18, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ASSOCIATED as vaccination is with the best interests of society, I cannot conceive a greater delinquent than the Practitioner, who by concealment, or a fraudulent statement of any case, imposes upon the public; it must, if persevered in, prove the greatest blessing, or the severest scourge, hitherto promulgated; notwithstanding, therefore, the

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the evidence in its favour is so respectable, the importance connected with its adoption, requires that no unfavourable evidence, if substantiated, should be rejected. Influenced by such sentiments, I am induced to circulate for general information, three cases of cow-pock failure as occurring in one family.

Julia Rose, daughter of Mr. Rose, High Street, Southwark, when six months old, was vaccinated by myself, and I have with my own, the evidence of Dr. Denman, as to the correctness of the vaccine vesicle. Frederic and Josephine Rose were vaccinated by a very respectable Practitioner; the first when five, the latter when one week old. Julia, when she had the small-pox, was seven years old; Frederic five, and Josephine three. That there should be no question as to the eruptions upon Julia being variolous, I took some matter from one of the pustules and inoculated an infant five months old, to which it communicated a mild small-pox. Frederic and Josephine received the disease casually from their sister, and, like her, had a mild small-pox. It has, I believe, in the few instances of failure hitherto recorded, been admitted, that where vaccination has failed in giving complete protection, it has usually insured a mild small-pox. There is strong presumptive evidence in favour of that opinion in the case of Julia Rose, who, when first indisposed, was suspected of sickening for the measles, and every aid by warm drinks, warm clothing, and a close room, employed to throw out the eruption; under such treatment therefore it may reasonably be inferred, that she could not have escaped a confluent disease, had not the previous vaccination modified the susceptibility of the constitution to receive the small-pox.

Let it not be understood that I possess a sentiment hostile to vaccination; for, admitting the case I have related (as my own) to be an instance of positive failure, it is the only one in an extensive practice of nine years, during which, I have invariably resisted variolous inoculation. My experience, therefore, by a comparison of variolous with vaccine inoculation, is decidedly in favour of the latter.

While on the subject of vaccination, it may not be irrelevant to remark, that either from a reluctance in Practitioners to admit of any imperfection in their practice, or from some cause interfering with their attention to the progress of the vaccine vesicle, I suspect there have been instances where the vaccination was not correct, yet suffered to pass without noticing the probable insecurity; in this observation

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observation I am supported by what occurred in a child inoculated by a gentleman in the County of Sussex.

It may not be convenient in an extensive practice, to register every individual case; but it is required of every Practitioner, when he sees an irregularity in the progress of the vaccine vesicle, to express his doubts as to the protection it may insure, to urge the necessity of a re-inoculation at some future period; nor would it to any great extent interfere with his engagements, were he to register such occurrences; by which, supposing small-pox to supervene, he might rescue vaccination from that unjust obloquy which has been attached to it.

Were Science the only object of those who go in pursuit of unsuccessful cases, the public would have to thank them, but some there are, who, it appears, only seek to impose, and the illiberality that accompanies their inquiries serves to detect them.

It is obvious that I am the decided friend of vaccination, but I am at the same time desirous that it should pass the ordeal of a free and rational inquiry; I must therefore deprecate that conduct which affects to support its infallibility, by refusing to admit the possibility of its failure. Cow-pock inoculation requires no such aid, and the public will be inclined to suspect what appears to require fraud for its protection should cease to be practised.

THOMAS KEY.

Fenchurch Street, June, 18, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Beg leave to offer a few remarks on Mr. Duck's case of Crural Hernia, recorded in your last Journal, as I am led, by his statement, to consider it in a different point of view from the impression it appears to have made on *him.*

It surely may be considered as very extraordinary, that five inches of the intestinal canal should have been thrown off in a sphacelated state, and yet a proper discharge by stool should have been procured only *on the day before* its separation, and that it should not, *afterwards,* have entirely interrupted the natural evacuation of the fæces for a longer period than is described by many days.

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The case is said to have been a strangulated crural hernia on the right side, accompanied with considerable inflammation of the protruded intestine, and also of the integuments. It was treated in the usual manner, and appears to have returned into the abdomen, or been relieved from stricture, after the injection of a tobacco clyster; as we are informed, that the patient had in consequence of it *too copious evacuations* by stool, and became easy. She is said to have continued also from this time free from pain in the bowels, and to have had afterwards, by means of an opening medicine, *another proper discharge by stool.* Nothing can be more decisive of the cessation of the stricture. The inflammation, however, it is said, terminated in gangrene; that five inches of the intestine sloughed off, and that the natural discharge by stool, after only some *days* interruption, began gradually to return, and at last was completely restored.

I think with Mr. Duck, it is highly probable that this case is similar to that of Abraham Pike, which he next proceeds to quote from the 3d Vol. of the Medical Observations and Inquiries: but I think so, on very different grounds from his. And that Mr. Duck should quote this case without *the explanation,* and publish it in this separated manner, as an instance of complete spontaneous recovery from a sphacelation of the entire substance of the intestinal canal, and therefore, as a similar occurrence to the one he superintended, is truly extraordinary; since the case he has quoted, is published in the place to which he refers his reader, *purposely* to shew what had been *considered as a mortified intestine,* was a mortification only of the *appendicula ceci vermiformis.*

The circumstances were shortly these: Abraham Pike was operated on for a strangulated hernia, and six inches of what was *imagined* to be the whole annular substance of the intestine, were cut off in a sphacelated state, and that after a short interruption only, the fæces resumed their natural passage through the bowels, and the patient lived many years in good health. This case was published at the time in the Medical Essays, and attracted a considerable degree of attention.

Some time afterwards, when Pike died, his body was opened by Mr. Simmons of Exeter, in the presence of several medical gentlemen, for the purpose of examining in what manner so singular an occurrence had taken place, when it was clearly ascertained that the part which had been

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been separated, and which had been supposed to be *intestine*, was only the *appendicula vermiformis*.

Mr. Simmons then, published this satisfactory explanation in the 3rd. Volume of the Medical Observations and Inquiries, adding the substance of the case itself, as it appeared in the Medical Essays, by way of note. It is this *note only*, which Mr. Duck has now quoted in support of his opinion, without noticing Mr. Simmons's explanation, to which it is subjoined, and detached from which, it is manifestly incomplete, and calculated to mislead the judgment.

Mr. Duck's case may or may not have been as he imagined; but I trust I have shewn you that the authority he has quoted, *if taken entire*, is decidedly against his opinion, and it is probable if he should have an opportunity of examining the parts after death, he may be able to explain it in the same satisfactory manner as was done in that instance.

Numerous cases have occurred in strangulated hernia, where, after portions of *the side* of the intestine have sloughed off, the faeces, in course of time, have been discharged through their natural passage, in consequence of an adhesion formed between the remaining part and the peritonæum; but I believe scarcely an instance has been properly authenticated, where the *whole substance* has been so separated for five or six inches, and without any care being taken to unite the living portions to each other, that a cure has been spontaneously effected.

I am, &c.

T. H.

June, 9, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

YOUR correspondent, under the signature of *Verax*, has in your last Journal required my opinion on the observations he has therein published, respecting the use of topical cold in gout. I have no desire to resist the application, though it must be confessed, it would have had a stronger claim to my compliance, if the author had made the demand in his proper name. In correctly investigating a medical

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medical subject, too much of real philosophy should direct the inquiry to admit of regarding any consideration that did not tend to render the research successful.

The motives and conduct of your correspondent in subjecting the cooling treatment of gout to trial, appear to be worthy of any name or rank in the medical profession, the author therefore needed not the disguise of a fictitious signature.

The cases in which "*Verax*" witnessed the beneficial effects of the cooling treatment of gout are sufficient to demonstrate to him that gouty inflammation, like all other diseases, may be safely and advantageously resisted. But this your correspondent thinks can only be done under the circumstances of youth, health, and constitutional strength, which he describes to have existed in the patients to whom the remedy was administered under his direction. It would be superfluous in me, at this advanced stage of the inquiry, to restate the refutation which this opinion has received in the numerous cases published, in which, much diversity of age, temperament, and concomitant disease, advantageously underwent the full efficacy of topical cold. Desirable as it may be to the timid, philosophical as it may appear to the rational, to have the respective limits of the safety and danger of the practice precisely marked out, it is not yet in my power to define the description of cases in which it would be unsafe or hurtful. In my *additional cases* lately published on the subject, are offered some observations for consideration as to the *impolicy* of resorting to the treatment where existing visceral disease and advanced age may give occasion to equivocal co-incidences, and tend to embarrass the fair progress of the inquiry.

It has never been pretended that topical cold will at once reduce inflammatory heat, and cure an indurated and thickened state of the ligamentous and tendinous structure. It will be therefore found that the treatment in such cases is more likely to prove a palliating than a radical remedy. By stemming the progress of the mischief already done, it promises to obviate farther evil, and thus to afford an opportunity for gradual amendment, if not for an ultimate reparation of the damaged fabric.

In asserting that the treatment is applicable in some instances and not in others, the dilemma is incurred of proposing at best a precarious remedy. Its safety in that case must depend on the correctness of discrimination that may have been exerted, which must render its adoption on every occasion too ambiguous, too fearful, ever to be fully justified.

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justified. If it be admitted that gout is a transient disease, that it has no fixed abode, that at one time by a salutary effort of nature it is in the great toe-joint, and at another, by morbid retrocession in the stomach, or any other vital organ, where is the authority, or where the boldness, that would venture on even an occasional trial of the influence of topical cold in that ailment?

Could it be imagined with "*Verax*" that those cases only of gout that are shielded by youth, vigour, and an unestablished state of the disease, are safely assailable by topical cold, what vindicable motive could be assigned for hazarding a dubious remedy against an affection that in most instances is supposed to prove beneficial to the general health?

The practical difficulty suggested by your correspondent respecting the application of the cooling treatment of gout, would appear to amount to no more than that, in certain cases in which the joints may not have been deeply injured by repeated and long continued paroxysms of gout, topical cold is directly and permanently curative, whilst it only temporarily alleviates the torture of joints inflamed, enlarged, and spoilt by the long standing and protracted ravages of the disease.

Deplenishing the inflamed vessels by drawing blood from the affected part with leeches, has not appeared in my experience, as it would seem to have done in that of "*Verax*," a previous requisite to the use of topical cold; it certainly may act as an auxiliary, but it is the aid which the usual efficacy of topical cold does not require, and which, therefore, unnecessarily diversifies the means of remedy. Indeed, the objection to it goes farther than its being superfluous; it may so far debilitate the inflamed vessels, as to lessen, rather than augment, (as "*Verax*" supposes) their re-active power, and thereby expose them to the risk of being chilled or benumbed by a free application of cold.

The extraordinary circumstances attending the case of the vintner, on which your correspondent has desired my opinion, deserves serious consideration. It will be found, I apprehend, on close examination, that the singular swelling of the genital parts alluded to, must have arisen from checked perspiration, induced, perhaps, by an undue use of topical cold during the three or four days it is stated to have been employed. Whether the inflammatory appearance on the elbow-joint was of a gouty nature, or resulted, as the patient himself imagined, from a sprain incurred in the exertion in which he was occupied, is not of much im-

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portance to determine, since it is well known that gouty inflammation, and sprain from external violence, reciprocally produce and suspend each other. They are diseases of the same structure, and subjected to the same laws in both the original and sympathetic action of their respective vital power.

It does not appear that the pain in the elbow and finger-joints had been subdued before the tumefaction took place in the genital parts; that occurrence, therefore, could not have resulted from a transference of the primary or gouty irritation; on the contrary, it is reasonable to conclude, that the continued violence of the gouty inflammation had induced symptoms of general irritation on the febrile state, said to have affected the system, and also the extraordinary effusion of water in the cellular structure of the external parts of generation. The tumour that presented, is stated to have assumed a livid hue; this must, it may be presumed, have arisen from an interruption given to the refluence of venous blood rather than from approaching gangrene.

It is not, indeed, observed, that severe inflammatory pain had preceded the appearance of the enlargement mentioned. This swelling, from its resembling the aspect exhibited by those parts on which it occurred, when distended by the effusion of urine into their cellular texture, was probably œdematous, and does not appear to have had any intelligible connection with gouty inflammation in either the stationed or shifting character of that disease. I know of no similar occurrence pending a paroxysm of gout; but an œdematous tumefaction of the penis and scrotum sometimes happens during the progress of chronic and towards the close of acute diseases; several instances of which have fallen under my own observation.

The cooling treatment of gout is either salutary or noxious, but the one condition or the other of its power must stand distinctly on its own efficacy; it must not be incumbered and obscured by irrelevant accidents, because they present simultaneously. Acuteness in medical observation is never more usefully or signally evinced, than in duly distinguishing and arranging morbid occurrences, so that causes and effects may maintain a clear and undisturbed connection. Time is no accurate test of the nature of morbid co-incidences; *post hoc ergo propter hoc*, is fallacious logic on medical as well as on all other occasions. The quality of an occurrence is a surer guide in search of hindered Nature than the period when it happened; thus,

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in the case in question, would it be reasonable to infer relationship or necessary connection between an inflammatoy affection on the elbow-joint, and an œdematous swelling from serous affusion on the penis and scrotum? The latter may, indeed, be a distant result of the former, but could not be involved as a direct consequence.

Your correspondent, under the assumed name of *Verax*, is entitled to my respectful consideration for the candid trial he has given the cooling treatment of gout. He has evidently entered on the practice with the most benevolent intention, and with that freedom from popular prejudice which enabled him to be sufficiently confident in its safety to submit it to experiment. His experience of its efficacy, as far as it has gone, appears to have been favourable enough, at once to justify the trial he has made, and to encourage its farther continuance. If no case more adverse to its success than that of the vintner is known to him, he surely may venture to resume his last confidence in its safety, and to prosecute the practice with unabated expectation of advantage from its employ.

Whilst on the subject of the cooling treatment of gout, I think it incumbent on me to aver, that it continues to afford in this neighbourhood, in as far as I have had an opportunity of learning its effects, all the benefit that can reasonably be desired, or that its advocates ever promised. Were it in my power to state any circumstance that militated against the principle on which the practice is founded, it would be disregarding the benevolence of my motive in originally proposing it for the relief of the sufferings of mankind, if I did not unreservedly make such objection known. The true merits of the practice will be best ascertained by neglecting no opportunity of faithfully noticing and recording its occurring defects.

I am, &c.

ROBERT KINGLAKE.

Taunton, June 9, 1808.

An Account of an HEMORHAGIC DISPOSITION *existing in certain Families.* By JOHN C. OTTO, M. D. *of Philadelphia.*

ABOUT seventy or eighty years ago, a woman by the name of Smith, settled in the vicinity of Plymouth, New-Hampshire, and transmitted the following idiosyncrasy to her

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her descendants. It is one, she observed, to which her family is unfortunately subject, and had been the source not only of great solicitude, but frequently the cause of death. If the least scratch is made on the skin of some of them, as mortal a hæmorrhagy will eventually ensue as if the largest wound is inflicted. The divided parts, in some instances, have had the appearance of uniting, and have shown a kind disposition to heal; and, in others, cicatrization has almost been perfect, when, generally about a week from the injury, an hemorrhagy takes place from the whole surface of the wound, and continues several days, and is then succeeded by effusions of serous fluid; the strength and spirits of the person become rapidly prostrate; the countenance assumes a pale and ghastly appearance; the pulse loses its force, and is increased in frequency; and death, from mere debility, then soon closes the scene. Dr. Rogers attended a lad, who had a slight cut on his foot, whose pulse "was full and frequent" in the commencement of the complaint, and whose blood "seemed to be in a high state of effervescence." So assured are the members of this family of the terrible consequences of the least wound, that they will not suffer themselves to be bled on any consideration, having lost a relation by not being able to stop the discharge occasioned by this operation.

Various remedies have been employed to restrain the hemorrhagies; the bark, astringents used topically and internally, strong styptics, opiates, and, in fact, all those means that experience has found serviceable, have been tried in vain. Physicians of acknowledged merit have been consulted, but have not been able to direct any thing of utility. Those families that are subject to certain complaints are occasionally relieved by medicines that are inefficacious when applied to others; and family receipts are often of greater advantage in restoring them, than all the drugs the materia medica offers for that purpose. A few years since the sulphate of soda was accidentally found to be completely curative of the hemorrhages I have described. An ordinary purging dose, administered two or three days in succession, generally stops them; and, by a more frequent repetition, is certain of producing this effect. The cases in which the most powerful, and apparently the most appropriate remedies have been used in vain, and those in which this mode of treatment has been attended with success, are so numerous, that no doubt can exist of the efficacy of this prescription. The persons who are subject to this hemorrhagic idiosyncrasy, speak of it with the great-

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est confidence. Deceptions may take place from accidental coincidence; but when a complaint has often occurred, and been almost uniformly fatal without the administration of a certain medicine, and has constantly yielded when it has been given, scepticism should be silent with regard to its utility. Nor should our inability to account for the fact, upon the theory and principles we have adopted, be conceived a sufficient reason for disbelieving it. An attempt to explain the mode of operation of this valuable remedy might give birth to much speculation. As the affection has been attended with mortality, and there is generally a disposition to give relief as early as possible, experiments have not been made with the other neutral salts to learn their comparative effect; nor have medicines been tried, whose operation might be supposed to be similar. The prescription being known to the whole family, application is rarely made to a physician; and when it is, it is rather with a view of directing him how to proceed, than of permitting him to make a series of trials and observations which might be at the hazard of the life of the patient. The utility of the sulphate of soda cannot arise from its debilitating effects, since it has been found serviceable when the previous depletion has been great, the strength much exhausted, and the system has evidenced symptoms of direct debility. Perhaps time will elucidate its mode of operation, and some general principles may be developed that may be applied to advantage in restraining ordinary hemorrhages; but reasoning upon what has been discovered to be useful in idiosyncracies, and applying it to the general constitution of human nature, must necessarily be vague, and productive of occasional evil. In every case, however, a doubtful remedy is preferable to leaving the patient to his fate. The sulphate of soda has constantly succeeded when administered; but the prescription being in the possession of the Shepard family, the descendants of Smith, and the cases that have been attended by physicians not being very numerous, it is impossible to ascertain the various states of the system in which it has been given, or to form any correct conclusions respecting its manner of acting. No experiments have been made on the blood, to discover if any or what changes take place in it.

It is a surprising circumstance that the males only are subject to this strange affection, and that all of them are not liable to it. Some persons, who are curious, suppose they can distinguish the bleeders (for this is the name given to them) even in infancy; but as yet the characteristic

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marks are not ascertained sufficiently definite. Although the females are exempt, they are still capable of transmitting it to their male children, as is evidenced by its introduction, and other instances, an account of which I have received from the Hon. Judge Livemore, who was polite enough to communicate to me many particulars upon this subject. This fact is confirmed by Drs. Rogers and Porter, gentlemen of character residing in the neighbourhood, to whom I am indebted for some information upon this curious disposition. When the cases shall become more numerous, it may perhaps be found that the female sex is not entirely exempt; but, as far as my knowledge extends, there has not been an instance of their being attacked.

The persons subject to this hemorrhagic disposition are remarkably healthy, and, when indisposed, they do not differ in their complaints, except in this particular, from their neighbours. No age is exempt, nor does any one appear to be particularly liable to it. The situation of their residence is not favourable to scorbutic affections or disease in general. They live, like the inhabitants of the country, upon solid and nutritious food, and when arrived to manhood, are athletic, of florid complexions, and extremely irascible.

Dr. Rush has informed me, he has been consulted twice in the course of his practice upon this disease. The first time, by a family in York, and the second, by one in Northampton county, in this State. He likewise favoured me with the following account, which he received some years since from Mr. Boardley, of a family in Maryland, afflicted with this idiosyncrasy.

"A. B. of the State of Maryland, has had six children, four of whom have died of a loss of blood from the most trifling scratches or bruises. A small pebble fell on the nail of a fore-finger of the last of them, when at play, being a year or two old; in a short time, the blood issued from the end of that finger, until he bled to death. The physicians could not stop the bleeding. Two of the brothers, still living, are going in the same way; they bleed greatly upon the slightest scratch, and the father looks every day for an accident that will destroy them. Their surviving sister shows not the least disposition to that threatening disorder, although scratched and wounded. The father gave me this account two days since, but I was not inquisitive enough for particulars."

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On the Means of lessening the PAINS *and* DANGER *of* CHILD-BEARING, *and of preventing its consequent Diseases; in a Letter to Dr.* EDWARD MILLER, *by* BENJAMIN RUSH, *M. D. Professor of Medicine in the University of Pennsylvania.*

DEAR SIR,

IT has generally been supposed, that a necessary and unchangeable connection exists between pain and child-bearing. Such a connection, it is true, was established between them, as part of the curse inflicted upon woman after the loss of her primeval innocence. A similar connection was established between labour and the sweat of the brow in man; and yet thousands of our fellow men live without labour, in the enjoyment of all the comforts of life. Even the curse which was inflicted upon the earth has been in part repealed, by the spontaneous or artificial fruitfulness which has succeeded to briars and thorns in many countries. The mitigation of the pains connected with child-bearing has been effected in Turkey, by the use of sweet oil (which acts only as a purge) during the last months of pregnancy. A similar alleviation of those pains has been produced by climate in a part of Africa, in the Brazils, in Callabria, in Sicily, and in several of the West India islands. A scanty diet has so far lessened them in the Indian women of our country, that they are able to work a few hours after their delivery, which is sometimes effected without the aid of a human creature. Heaven, in these instances, has kindly intimated to us, that the pains of child-bearing are not entailed upon the female sex by an immutable law. In our attempts, therefore, to improve and extend the means of lessening them, we do but develope the kind and benevolent disposition of the Creator of the world to the human race.

To induce a belief in the efficacy of certain remedies which are calculated to lessen, and, perhaps, finally to destroy, the pains of child-bearing at all times, and in all states of society, it will be necessary to premise the following propositions.

1. Previously to child-bearing, the female system is gorally plethoric, and unduly excitable, from the ratio between exercise and the appetite being destroyed by an excess of the latter during pregnancy, and from the influence of the distended state of the uterus upon the whole system.

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2. Child-bearing is a disease. The form of this disease is a spasm of a clonic nature. It does not militate against the truth of this proposition, that the morbid affection of the womb is not attended with inflammation; for we now know that disease does not consist in inflammation, that it is one of its effects only, and that the highest grade of disease often exists without inflammation. The symptoms of this parturient disease sometimes appear in chills, preternatural heat, thirst, a quick, frequent, full, and tense pulse, pains in the head and other parts of the body.

3. The operations of Nature in this disease, as in most others, are excessive, deficient, or not properly directed to accomplish her purposes. Their *excess* appears occasionally in great pains in the bowels, in hæmorrhages from the uterus, in convulsions of the whole nervous system, in the total absence of contraction in the uterus from the suffocation of its morbid excitement, in the wrong position of the fœtus in utero, and in the protraction of exquisite and fruitless pains far beyond the time necessary to exclude the fœtus. The operations of nature in child-bearing, I believe, are not often deficient in force. Women who have been debilitated by previous diseases, or by accidental evacuations of any kind, have generally very easy and natual labours.

As a natural inference from the above propositions, I go on to remark, that the remedies for difficult and painful parturition should be the same as for all other convulsive and spasmodic diseases, taking care to vary them according to the force of the disease and the state of the system. As the difficulty and extreme pain of child-bearing arise chiefly from an excess of natural force, or from an improper direction of it, I shall first mention the remedies for lessening its pain and shortening its duration.

The first of these remedies is blood-letting. I suggested the use of this remedy, with most of the above reasons in its favour, in my Lectures, in the year 1791. On the 11th of January, 1795, a man came into the Pennsylvania Hospital, whose shoulder-bone had been luxated for two months. All the usual methods of reducing it had been tried to no purpose. Dr. Physick, to whose care he was committed, began his preparations to relieve him, by drawing blood from his arm until he fainted. While he lay in this insensible state, the Doctor reduced the bone with but little force, and nearly in the twinkling of an eye. This easy and happy cure increased my confidence in the lancet in parturition. It was confirmed still more by recollecting its

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its controuling influence over the morbid excitement of the uterus, in preventing abortions in the yellow fever of 1793, and by reflecting on the instant relief which it affords in colics, convulsions, and all other violent diseases, which affect, at the same time, the muscular and arterial systems. But I am happy in being able to add, that my opinion of the efficacy of blood-letting in abating the pains and danger of child-bearing, no longer rests upon reasoning and analogy. Dr. Dewees, of this city, has adopted it with the happiest effects. Dr. Brown, formerly a pupil of Dr. Physick, has lately used it in his practice in Chester county, in our State, to an extent which has added greatly to the benefits derived from it. He seldom draws less than thirty ounces of blood in the beginning of a labour. The consequences of this copious loss of blood, in the diminution of pain, and accelerating the exclusion of the fœtus, have been highly grateful to his patients, and pleasing to their friends. Considering the predisposing causes of plethora and excitability which have been mentioned, I am disposed to believe a much larger quantity of blood than thirty ounces might be drawn in some cases, and at certain times, with advantage. These times are in the winter and spring months, and during the prevalence of inflammatory and malignant epidemics; for, in the latter period, Hippocrates long ago observed labours to be more difficult than at any other time.* It is from the influence of the same state of atmosphere which produces these more difficult labours, that abortions are so common during the prevalence of the plague in all countries.†

I am aware that this remedy is not a new one to a certain degree; but I believe it has never yet been advised nor used in the copious manner, nor regulated by the morbid phenomena of child-bearing, which have been mentioned.

2. In addition to the loss of blood, suited in quantity to the symptoms of the parturient disease, the bowels should be plentifully opened by means of glysters, and the diet and drinks should contain as little stimulus and nourishment as possible.

3. Perhaps an advantage would arise from advising a low diet to pregnant women for ten days or two weeks before they are confined, also from the use of lenient purges once or twice a week, agreeably to the Turkish practice, during the

* Book i, Const. 3d. † Diemerbroeck de Peste.

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the three last months of their pregnancy. The good effects of this regimen in lessening the violence of the small-pox and yellow fever, encourage us to expect similar benefits from it in the violent disease of parturition.

I have hitherto advised the use of blood-letting, and other depleting remedies, only as the means of lessening the pains and danger of child-bearing; but their advantages would probably extend much further, by preventing the after-pains—hæmorrhages—obstructed lochia—retention of the placenta—prolapsus uteri—inflamed breasts—swelled legs—colics—madness and fevers, which so often follow delivery. Even the fœtus would probably be benefited by the use of the above remedies, by suffering less from pressure and bruises, in a tedious and painful passage into the world.

You will perceive, from what has been advanced, that the principle design of this communication is to suggest that a morbid action may be converted into a natural one, and thereby placed upon a footing with other actions of the body which are painful or tedious only from disease. The lower limbs and the arms, which suffer exquisitely in a rheumatism, are overstretched, without pain, in running, and lifting heavy weights. The blood-vessels, likewise, when excited into morbid action in a fever, communicate pain to the head and other parts of the body; but the same vessels, when increased in their force and dimensions by the equable and healthy action induced by violent exercise, are never known to produce pain, and subside by rest, without danger or injury to any part of the system.

The cases of difficult and painful delivery, from a state of the system below that to which depleting remedies are calculated to reduce it, I have hinted, rarely occur. Most of the labours I have met with, or heard of, in the last stage of chronic diseases, have been short, and comparatively easy.

Where there is reason to believe the contractions in the uterus will be too weak to expel the fœtus, a cordial diet should be advised previously to the expected time of confinement; and where the absence of throes, and the slow progress of delivery, indicate a deficiency of muscular irritability in the fibres of the uterus, opium should be given in proportion to the exigences of the system. I think I have seen the happiest effects from that excellent medicine, in such cases, in destroying useless pains, and shortening the duration of labour. How far a medicine so powerful (if such can be found) as wholly to suspend the sensibility

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of the nerves, without impairing their irritability, might succeed in destroying pain altogether, I know not; but the following fact shows that it has been destroyed by a disease which produced that effect upon the nerves. A lady, who had been for several years subject to epilepsy, was delivered of a child in one of her fits. Immediately afterwards she fell asleep. Her child was dressed, and laid by her side. In the morning, as soon as she awoke, she saw this child, and asked with surprise whose it was. Upon being told it was hers, she declared that she had no recollection of having felt the least pain in bringing it into the world. This information was communicated to me by the husband of the lady, a few hours after her delivery, for I was then attending her for another indisposition. In this instance we see what Dr. Darwin calls a sensitive and irritative disease, converted into a disease wholly irritative.

Philadelphia, May 12, 1802.

P. S. In looking over some old letters upon medical subjects, I met with a communication from one of my former pupils, Dr. Bullus, which forcibly illustrates the principles and practice contained in the foregoing letter upon the parturient disease. In the month of July, 1797, the Doctor was called upon at Reading, in Pennsylvania, to attend a women, about the last month of her pregnancy, in a malignant fever. By the use of copious bleeding and a salivation she recovered. But her labour soon afterwards came on, "and (says the Doctor), as it continued rather long, I bled her twice. Immediately after binding up her arm, I delivered her of two fine boys, without any difficulty to myself and with scarcely any pain to my poor patient. She has since told me that she had never experienced so little pain in any of her former labours, which have been fourteen in number, and that if she were to undergo twenty more she would always be bled in them." In a subsequent letter, dated July 30th of the same year, the Doctor says, his patient, whose name is Ann Harkner, had consented to the publication of her case, and that, if necessary, she would subscribe it with her name.

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Observations on the Inflammatory Affections of the Mucous Membrane of the Bronchiæ. By CHARLES BADHAM, M. D. Member of Pembroke College, Oxford; Physician to his Royal Highness the Duke of Sussex, and to his Household; senior Physician to the Westminster General Dispensary; and Lecturer on the Practice of Physic. 12mo. London, 1808.

In the introductory chapter the learned author traces, with much diligence, the history of the early opinions concerning those complaints in which the breathing and secretion of the organs concerned in that process are particularly affected. In doing this he shows a nice discrimination on these important subjects, and proves that the ancients, with all the disadvantages under which they laboured from want of a knowledge of human morbid anatomy, were extremely judicious in their observations.

In the succeeding chapter we have a review of the "opinions of modern systematics on bronchial affections," or, as it might as well have been expressed, an account of the various descriptions of bronchial affections since the time that an attempt has been made to arrange diseases in nosological order. Hoffmann is allowed the credit of a most accurate description; and, indeed, the passage quoted by our author is almost as complete as if he had been aware of the causes of a disease, which, for want of sufficient opportunities of dissection, he imputes to a paralysis of the nerves belonging to the organs of respiration. The passage is so striking that we shall transcribe it from the work before us, with the author's note, and his remarks on Sydenham.

"Trahitur in hoc morbo summa cum difficultate et anxietate spiritus, et quiâ bronchiis, secedente a sanguine humore viscido seroso, repletis, nihil tamen sputi rejicitur aër admissus strepitum et ronchum in fistulis edit, donec præcluso penitus aëre, æger suffocetur. Quod antiquam evenit pulsus aliquot sæpe ante horis intermitit, sensim gracilescit penitusque intercidit: non nunquam etiam mentis turbatio* cum extremorum frigore supervenit.—Med. Rat. Syst. sect. i. 17. xvi.

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* No writer but Hoffmann has remarked this symptom. It is evidently not a remark of the closet; the author has more than once been convinced of its accuracy. It is, however, only an occasional symptom.

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" The description of a disease under the name of peripneumonia notha, which we owe to the illustrious Sydenham, has been regarded (perhaps erroneously) as an original account of an affection of the lungs not previously known. He appears rather to have described with greater felicity and correctness than others, an inflammatory affection of the bronchiæ; and one of the causes which may occasion the difference between his account and those of other writers, is probably this—that he describes the disease in its incipient state. The complaint is insidious; its first symptoms, therefore, would readily be overlooked by less accurate observers; whereas, in its advanced stage, with the symptoms of catarrhus suffocativus, nobody could fail to recognize it.

" Primo febris insulsu nunc incalescit æger nunc friget. Vertiginosus est: de capitis dolore quæritur lancinante quoties tussis importunius fatigat: urina turbida cernitur et rubens intensē: sanguis detractus pleuriticorum sanguinem refert. Anhelus sæpenumero spiritum crebro ac celeriter ducit; si moneatur ut tussim provocet, haud aliter dolet caput, ac sī in partes mox dissiliret. Dolet et thorax omnis, pulmonum, coarctatio auribus adstantium percipitur.

" In this description of Sydenham, several material symptoms are noticed, which belong chiefly to the first stage of the disease, and serve to mark its essential character. The state of the pulse, the peculiarity of the respiration, the appearances of the blood and of the urine, and the head-ach which attends, are all important particulars; and if the description itself were in any respect defective, if it had left us in doubt whether the affection were of an inflammatory nature or not, we should have our difficulties removed by adverting to the practical directions which follow. Venesection was employed, and even repeated, and an antiphlogistic treatment was adopted."

Lieutaud's account follows, which is shown not to differ materially: some just observations are made of the undefined term of *infarction*, adopted by this and most other writers before Cullen. In mentioning the last writer, Dr. Badham has fallen into the too common failing of most of his contemporaries. That Cullen was unequal to as much as he attempted cannot be doubted; that he followed Sydenham's descriptions whereever he could, is equally certain; and that what he added of his own now appears often unsatisfactory, must be admitted. But it is unnecessary to be always reminding us of this. We ought not to forget that he did much towards the destruction of the humoral pathology, that he taught us to study Sydenham, and that he directed us how to *acquire* that knowledge which a longer life than his could never have *imparted*.

In the third chapter the author attempts a subdivision of the diseases of these parts. This is introduced by some general remarks on the nature and effects of inflammation, according to the constitution, habits, and previous state of health in the subject. Taking the

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the term Bronchitis as a genus, it is divided into three species, acuta, asthenica, and chronica. The first of these is the disease which makes the subject of the work; the second the peripneumonia notha of Boerhaave and his followers; the third comprehends the humoral asthma of the same school, *tussis senilis*, and the varieties of each. We have many objections to the term by which our author designates the second division; perhaps, one may be, to the school to which it owes its origin. But such are our prejudices, that we should be much better pleased if the term chronica were used for any inflammation not acute; and for the last division, either the word habitual or periodical. We shall not, however, enter into a controversy about mere words, but proceed in the language of the author to examine the rest of his work.

Though it might seem more regular to begin with a description of the acute disease, yet Dr. B. very properly prefers first ascertaining, with as much precision as possible, the true character of a disease more frequently occurring, and tolerably well ascertained. By these means it will be more easy to mark the difference in the true diagnosis of the two complaints. The description of Bronchitis Asthenica is as correct as we might expect from so judicious a writer and teacher; we are much pleased with the concluding part, in which the reader is cautioned not to mistake the sequel of the disease for phthisis pulmonalis, how strong soever the resemblance may be in the emaciation of the patient, and even the appearance of the expectoration. It is suspected, with much probability, that most of the supposed cures of phthisis have owed their origin to this error. A proper attention is, therefore, given to the means of discriminating the two diseases; and with some judicious remarks on this subject this part of the work concludes.

The fourth chapter contains the history of Bronchitis acuta, with some cases and examinations after death. The first thing remarked of the disease is the suddenness of the attack, its violence, and its frequent termination at the end of a few days in extreme debility. After marking other more common symptoms to their termination, the author enumerates several which are more particularly striking and characteristic. The chief of these are the peculiar violence and suddenness, its earlier termination in death than most other pulmonary diseases, and the slowness of the pulse after the first inflammation has subsided. This is well illustrated by a few cases, the first of which we shall transcribe.

"About four years ago, a man of forty years of age, exceedingly muscular, and of health which knew no interruption, went out to Greenwich on Easter Monday, and heated himself by the coarse amusements which are customary on that occasion. He found himself ill in returning to town at night, went immediately to his bed, and was attacked with the symptoms above related. He was seen on the second day; it was then not too late to bleed him, and, as far as recollection serves, this operation was repeated, but with inconsiderable relief. Every other measure which seemed likely

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likely to be of service, was of course adopted; but he died within the week

"The chest was examined the day after. The bronchiæ were completely plugged up by a thick tenacious secretion; but the lungs were perfectly sound, and there were no adhesions, or other marks of disease."

Two other equally pointed cases follow, with the dissections; and the chapter concludes with some remarks on the probability that the secondary pectoral symptoms of measles and the dyspnœa, which supervenes to hooping cough, have usually their origin in this affection of the bronchiæ.

The fifth chapter contains the termination, pathology, and diagnosis of these diseases, and the sixth the treatment. In the first we have many very useful remarks, well illustrated by the writings of others; in the last a series of practical and judicious observations.

The work concludes with a chapter on the history and treatment of chronic coughs. We should here have been satisfied with the author's practical remarks, which, though not altogether new, are very judiciously chosen, without his theory concerning over excitement, consequent debility, and diminution in the activity of the smaller vessels.

An appendix contains two well related cases, with their dissections.

On the whole, we recommend this performance as a well written and useful συγγραφιδιον, (the author will perceive our reason for preferring that word) and shall be always glad to see other single diseases taken up with the same diligence and judgment.

An Exposition of the Practice of affusing Cold Water on the Surface of the Body, as a Remedy for the Cure of Fever; to which are added, Remarks on the Effects of Cold Drink, and of Gestation in the open Air, in certain Conditions of that Disease. By ROBERT JACKSON, M. D. Edinburgh. 1808.

For the present work, we are informed by a preface, we are indebted to a passsge in Dr. Currie's fourth editition, in which Dr. J, is charged with arrogating to himself the merit of introducing the practice of affusing cold water on the surface of the body, as a remedy in fever. Dr. J. is further accused of having omitted the mention of Dr. Wright's name, to whom the discovery is said to be due. A note follows, in which Dr. Wright's claims are stated by the author of the present work. This we shall transcribe.

"Dr. Wright, the person alluded to in this place, was a practitioner in Jamaica prior to the year 1777: he stands in the Army List as surgeon for the 99th regiment, which was raised at a late period of the American war, and, I believe, sent to serve in the West Indies: he was appointed physician to the forces in the

year

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year 1795; and, he lately filled the president's chair at the Royal College of Physicians of Edinburgh.—His claim to the discovery of affusing cold water on the surface is shortly this. Some buckets of cold sea water were dashed, at his own desire, upon his own person, while he suffered from fever during his passage from Jamaica to England in the year 1777. He published a statement of the fact in a periodical journal in the year 1786; but he did not then inform the public that he had repeated the experiment in the interval of nine years, between 1777 and 1786. If the experiment was not repeated in so long an interval, where we must suppose, from his official station, that opportunities for prosecuting the practice abounded, we cannot admit that he made a discovery; for, according to a just view of the subject, a medical discovery comprehends something more than a solitary experiment."

Dr. Jackson remarks, that the origin of the practice would have been of less consequence, had not his veracity been called in question; and should he be found wanting in so important a requisite, the authority of all his cases, observations, and whatever information he may offer, would be lost to mankind. To answer such a charge would have required only a statement of facts, which would have occupied a few sheets: but in examining the rest of Dr. Currie's reports it appeared, that an attempt was made to controvert the *principles* on which Dr. Jackson acted. This led to a reflection on the importance of a fair statement, not only on account of the author's reputation, but from the consideration of his duty to the public as an army practitioner. Still further he conceives, that the principle assumed by Dr. Currie, and apparently established by the result of his correspondence, is simple enough to become *popular*, though in many respects erroneous. His own, on the contrary, he admits is more complicated, requiring the most minute examination, explained with difficulty, and not always within the comprehension of those who have even some previous medical science. He frankly acknowledges, that after the labour with which he has pursued the subject, he is still unable to produce an unerring rule by which the application of cold water may be safely regulated. The standard of heat, as ascertained by the thermometer, he conceives extremely fallacious. All this will be more minutely illustrated in the progress of the work.

The first part contains a short history of the introduction of cold bathing into medical practice as a remedy for fever. This is traced to the treatment of the Emperor Augustus, not omitting the hints contained in the writings of Hippocrates. From thence the practice is followed through what is left of the orientalists, and those travellers who have described their manners. It is not our intention to under value the labours of an author whom we have always treated with peculiar, but by no means unmerited, respect. We only regret that the mode of life he has chosen has prevented his application to those records which rarely occur but in extensive libraries. Had it been otherwise he would have met with a most interesting

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interesting paper by Dr. Armstrong, on the subject of cold bathing in fevers. That, in many respects, original author speaks of the practice as entirely in disuse; and, so contrary to the opinions of his contemporaries, that he leaves it to the consideration of the next generation. There is something at least prophetic in this; and we cannot help wishing that he had lived longer, and been sufficiently engaged in practice to have introduced so valuable a remedy. But to return to Dr. Jackson. The passage now before us offers so succinct an account of the controversy concerning the introduction of the cold affusion that we shall transcribe it, in order that we may confine our future remarks to the practical lessons with which the work abounds.

"I myself*, as appears by histories detailed in my treatise on the Fevers of Jamaica, published in the year 1791, employed cold bathing as a remedy for the cure of fever as early as the year 1774; and facts which are commonly known shew, that I introduced it into the hospitals of the British army at an early period of the war 1793. If the practice was known to some at that time, it was not yet commonly adopted. In my treatise on the Fevers of Jamaica, which was published in the year 1791, it is probable I may appear to arrogate to myself more of the claim of introducing the practice into notice than is justly my due; for I now know, what men acquainted with books knew then, that sponging or washing the body with cold water was employed by De Hahn for the cure of a malignant fever which ravaged Silesia in the year 1787. The remedy is mentioned by De Hahn in terms of strong commendation; but there are no grounds to believe that it obtained currency among medical practitioners in Germany, in consequence of what he said in its praise. The practice in fact does not appear to have made progress in Germany; and it was not recommended by any name of eminence in the British dominions in the year 1774, when I was led to bring an accidental suggestion to the test of experiment. The hint which led to this experiment was drawn from the conversation of Captain Cunningham, a seafaring man, who had been master of a transport ship at the siege of Havannah, and who was master of a merchant ship in 1774. I embarked with him as passenger for Jamaica in the beginning of the abovementioned year, and I recollect his having mentioned one day during the passage, when discoursing of the events of the war of 1756, the circumstance which I have related in my treatise on the Fevers of Jamaica respecting this subject, viz. that some sick persons who were on board of his ship, which appeared to have been a kind of hospital ship, threw themselves into the sea,—as if to drown themselves. The greater part of them, he observed, were recovered from the waves, and, as far as he recollected, they were restored to their senses, and

* "Treatise on the Fevers of Jamaica, published 1791, notes, p. 48, &c."

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benefited in their health by the ducking. The fact struck me strongly as applicable to the cure of fever; and, in consequence of this impression, I resolved to make trial of a similar experiment when a favourable opportunity should offer to me. This in fact soon presented itself, viz. in the latter end of May of the same year, in the person of a sailor, an European, lately arrived at Savanna la Mar, where I resided. This is the simple state of the case. I do not perceive that it is connected with circumstances which can afford any just grounds for the most scrupulous to suspect that it is not true; yet I have to remark that some have insinuated obscurely*, and others have asserted roundly, that its authenticity is doubtful†. If these or others expect legal proof, by the depositions of ocular witnesses, that I actually employed cold bathing for the cure of fever at the period stated in my treatise on the Fevers of Jamaica, I must confess that I cannot furnish them with such satisfaction; for it is more than probable that no ocular witness of the first experiment, and even of the subsequent repetitions of the practice during the period of my residence in that island, is now among the living. But though I cannot promise the satisfaction on this head that such persons may require, I believe the subjoined certificate from Dr. Gregory‡, Professor of Medicine

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* "Medical Reports, vol. ii. p. 193: "*He (Dr. Jackson) "has unaccountably omitted to mention Dr. Wright's name and discovery, which was before the public, five years prior to the publication of his Treatise on the Fevers of Jamaica.*"

† "Edinburgh Critical Journal, April 1804.—This journalist observes, that "*if he (Dr. Jackson) employed the cold affusion so early as he pretends, the details of its effects do not, in all probability, redound very much to his credit; and these he has accordingly very prudently suppressed.*" The assertion is not true; the details of the practice, and its effects, are given at length in the book above alluded to; but it would be an insult to the public to take any further notice of the suspicions of this journalist, who appears to regard nothing less than truth and candour."

‡ "The fragment in Dr. Gregory's possession is an abstract from fuller notes made at different times respecting the history and cure of the Fevers of Jamaica, and it may be supposed to comprehend the sum of my experience on the subject at the time it was written. I did not know of its existence till the year 1798, when it was presented to me by Dr. Gregory. I thought it had been lost among some other papers which were lost in America; but I now find that it had been given to Dr. Cullen, or rather to Dr. Henry Cullen, not by myself, but by a person with whom I left it when I went to the continent in the year 1788*. The circumstance escaped his memory when I returned, and it did not come into my own recollection till lately. The fragment alluded to may thus be supposed to have been in Dr. Cullen's library at the time of his death, after which it, by some chance or other, came into the hands of a medical gentleman in Edinburgh, who gave it to Dr. Gregory, on hearing the Doctor refer in his class to some observa-

* "That it was in Dr. Cullen's possession, I conclude from his having mentioned my opinions on the Fevers of Jamaica in his class in the year 1787 or 1788."

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Medicine in the University of Edinburgh, a person whom the editor of the Edinburgh Review himself will not suspect of collusion in the case, will be deemed conclusive evidence, in the opinion of most, that the remedy in question was recommended by me, and it.

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observations made by me on the connection of the moon with fevers, which were communicated to Sir Joseph Banks, to the best of my recollection, in the year 1787 or 1788. Such is the history of this fragment: it is now in the possession of Dr. Gregory, who has obligingly desired such passages as relate to cold bathing to be transcribed for my satisfaction. These, as private notes not intended to see the light, may be held to be satisfactory proof that I had witnessed the good effects of cold bathing in different forms of fever; and while they do this, they prove at the same time, that I did not consider it as a practice to be employed indiscriminately, or that I expected uniform success from it, without caution and previous preparation of subject. Its effects are first noticed in *remittent fevers*—"In order to remove a topical pain, the evacuation (venesection) ought to be made as quick as possible; and it would be proper at the same time to place the patient *in semicupio*, and, perhaps, to apply cold, to dash cold water on the part from which we wanted to dislodge the pain, particularly if the cold could be brought to act on the part, as in the particular instance of topical affection of the head." &c Page 44.

"*Malignant Fever.*—"The warm and cold baths, generous wines, lively conversation, and music, if they are applied with judgment," &c. Page 55.

"*Continued Fever.*—"It is an object of greater moment, if we know how to stop the progress of the disease at once, or to change its nature from dangerous to mild, and from continued to remittent. The cold bath, properly managed, promises fairly to attain this end. In the few cases where I have seen it tried, it produced the most amazing effects. It promoted sweat, procured rest, and gave such strength and vigour to the system, that a patient who before it was applied could not raise his head from the pillow without shaking and fainting, was able next day to walk about the room. In a word, it seems to be a remedy fit to do every thing that is wanted in this case, if the sensibility of the system be not very much impaired, and even then more may be expected from it than from any other we know. The water that was used was from the sea, and had a large proportion of salt dissolved in it. This is more particularly proper, where the sensibility is impaired. The warm bath too may sometimes be of signal use, particularly the alternate application of this and of the cold bath; but it requires great judgment to use them with full advantage; at the same time they appear to be in general innocent." Page 63

"*Yellow Fever.*—"For all those purposes the cold bath, particularly if a large portion of salt be dissolved in the water, is a most capital remedy. If the sensibility is not much impaired, we may expect to attain our end with certainty. If the sensibility is very much impaired, it is certainly doubtful, though it promises more than any thing I know. There are a great many circumstances, however, which must go along with the use of it, in order to give it full power, and every advantage, particularly the prudent use of the warm bath and of wine," &c., Page 69.

"Transcribed by Mr. John Thomson, from a fragment of Dr. Jackson's original papers, which have been long in my possession, and forwarded by me to Dr. William Robertson of Bath.

(Signed) "J. GREGORY."

Edinburgh, Oct. 24, 1807.

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it may thence be presumed, was employed by me at a date prior to the appearance of Dr. Wright's narrative, probably prior to the existence of his experience; for the fragment from which the extract is made was written in Jamaica, and necessarily written not later than the year 1777, as I left the West Indies early in 1778 to serve with the King's troops in America. The narrative by Dr. Wright, which forms the ground-work of Dr. Currie's volumes on the effects of water, made its appearance in the year 1786; my treatise on the Fevers of Jamaica was not published till the year 1791, consequently I might have known of it; but it does not follow, as the editor of the Edinburgh Review arrogantly pronounces, "that I could not be, or ought not to have been ignorant of it." I might address similar language to others; but it is not language to be addressed to a gentleman. My treatise on the Fevers of Jamaica was published in the year 1791. It contained stronger commendation, and fuller proof of the benefits of cold affusion, in certain circumstances of fever than any modern book then extant. It was reviewed in most of the periodical journals of the time, and it did not, perhaps, stand lower in their estimation than the narrative of Dr. Wright, which is now held to be so important. This is the fact; yet, I do not therefore say or insinuate that Dr. Currie acted unaccountably or disingenuously in not referring to it in the work which he published in 1797, six years after it made its appearance; I only contend that, as Dr. Currie derived no hints of information from my treatise of 1791, my claim to credence is not inferior, when I aver that I derived nothing from Dr. Wright's narrative of 1786. The fact is, I did not know of it; and if I did not know of it, it is plain I could not notice it. That is clear; but I now add, that had I then been acquainted with it, and taken all the light from it which it can be supposed to give, the task of making a book from such meagre materials, without some experience of my own, would have far exceeded my abilities. The instance of the success is solitary, or next to solitary; and when I see that its author, whom I allow to be a zealous physician, made no use of his discovery in the period of the nine years intervening between 1777 and 1786, though we are given to understand by the author of the Medical Reports that he had been in a foreign country in the interval, and, it would further appear, employed in some station of public service, where he could not be supposed to be without opportunities, indeed where occasions must have necessarily abounded which called for the most powerful aids of the medical art, the narrative sinks to the bare record of a fact: which, however important in itself, led to no consequences in the hands of its recorder, and cannot therefore be fairly supposed to be calculated to form a basis on which another could establish a system of practice."

The author proceeds next to detail his further experience. This was in the 3d Regiment of Foot or Buff, to which he was, in 1793, appointed regimental surgeon, as the only road by which, according to Mr. Hunter's regulations, he could arrive at the office of army

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army physician. Here our author had ample opportunity of tracing all the varieties of what he calls infectious fever, usually denominated Typhus. The regiment had received a number of recruits, and among them the disease could scarcely fail to be introduced. The attention to bathing and athletic exercises prevented its extension. But in the summer of 1794, Jersey being fixed upon as a depot for organizing and disciplining new recruits, sickness became very general, and the infectious fever of jails or hospitals attacked them in their crowded quarters. The 88th Regiment arrived at this time, and their surgeon, Mr. M'Gregor, was attacked with fever. During this time Mr. Thompson, then assistant surgeon of the Buffs (Dr. Jackson's regiment) was ordered to attend the hospital of the 88th. Mr. Thompson having seen the advantages attending cold affusion in the treatment of the Buffs, adopted it on the present occasion. Dr. M'Gregor acknowledges the advantage of it in his Medical Sketches, as well as in his correspondence with Dr. Currie.

In the autumn of 1794, the Buffs arrived at Bergen-op-Zoom, in high health, but very early in the autumn the usual fever attacked most of them, excepting only the commissioned officers. The cold of 1794 and 1795 was unusually severe, and the quarters of the troops were, for the most part, barns, without the aid of artificial heat. Even under these apparently unfavorable circumstances Dr. Jackson was not deterred from his favorite remedy. His plan was, however, in the first instance, to rub the skin well with a brush, cleansing it at the same time with soap and warm water. The water being intensely cold, affusions were not always attempted. Sponging, or even sprinkling, were found sufficient. Under this treatment the mortality was inconsiderable, compared with the extent and severity of the disease.

The division of troops under the command of Sir Ralph Abercrombie, in the year 1795, rendezvoused at the Cove of Cork, in the month of October. Being detained the greater part of the winter, and in very confined quarters, the mortality was considerable from the usual causes. That division which was under the care of our author at a temporary hospital, in Spike Island, was treated with cold affusion with great success. Even in the hospital ship John, which conveyed the sick and convalescents to the West Indies, the same mode of treatment, varied according to circumstances, was adopted in every stage of the disease, for the most part with advantage. The author's particular situation enabled him to form a fair estimate of the expectations to be formed of the remedy in the more advanced period of fever. Here he often found himself disappointed. At the Mole, in St. Domingo, he assumed the office of surgeon of the 56th Regiment for a period of six weeks, in order to ascertain, with some certainty, how far the dreaded fever of that climate might be subdued by any mode of treatment. Under certain conditions of fever he found the greatest advantages from cold affusion, but soon perceived that it was not

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to be indiscriminately applied, and that in many instances it was necessary to prepare the subject by bleeding and other means.

In the year 1799 the Russian auxiliary forces, being ordered to Jersey and Guernsey, and crowded in the transports during boisterous weather, became sickly. Dr. Jackson having the medical superintendance committed to his care, and recollecting the well-known custom among those people of submitting themselves to the extremes of heat and cold, conceived the present a fair occasion to try the effects of a similar practice in the treatment of fever. Unsanctioned, however, as it was by the German practitioners, who form the principal medical assistants in a Russian army, the trial could be only partial. In the cases in which it was employed it was found perfectly safe, and often advantageous. In the following year Dr. Jackson was appointed army physician, and head of the depot at Chatham. Here he had ample opportunities of ascertaining the full effect of his favorite remedy, and the success was demonstrated by the army returns of sick and cured. When the depot was removed to the Isle of Wight, the accommodations were inadequate to the necessities of the sick, the list of which increased during the whole winter. The disease was in its highest state of aggravation, yet the returns show that the balance of success was in favour of the warm and cold affusions.

"As this is proved," says our author, "by evidence which cannot be doubted, it must appear to the reader to be a striking, though it is not a singular instance of the caprice of medical opinion, that cold affusion for the cure of fever should be hailed as a discovery of great importance to the interest of the British army, and as such thrown under the protection of the Commander in Chief* in the year 1805, while it was represented, in the year 1801, by the present Physician-General† to the same Commander in Chief, as one of the dangerous and destructive practices of the author of this Exposition."

The second part begins with a vindication of the author's publication on fevers. In this he explains how he has been misunderstood by Dr. Currie; a subject on which we have before had occasion to remark. The principles of the two are contrasted, to show not so much the superiority of the author's own, as that, long before the publication of Dr Currie's work, he had systematically arranged his plan of operations, and on a mode of reasoning totally unconnected with the theory or opinions of Dr. Currie. On this subject we say as little as possible; first, because it has already been before us; next, because Dr. Currie is no longer living to vindicate himself; but most of all, because his friends, who are very numerous, and the partizans of his opinions who are still more so, are not likely to be convinced by what we can say; and those

* "Dedication of the 4th edition of Dr. Currie's Medical Reports.
† "Remarks on the Medical Constitution, &c. P. 122."

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those who have impartially attended to the controversy need no information from us. Passing over, therefore, the expressions quoted from Dr. Currie, which his best friends will wish had been omitted, we shall just notice the pointed manner in which Dr. Jackson remarks the different opinions and different mode of applying this powerful remedy, by Dr. Currie and himself. With Dr. Currie he remarks, the fundamental, if not the indispensable, conditions which warrant the safety and insure the success of the effect of cold affusion on the surface are increased heat and high temperature. The reduction of temperature, or subtraction of heat, by the application of cold water, is maintained to be the cause which dissolves the febrile association, and thereby cures the disease. When the presence of heat is indicated by the thermometer, the remedy is applied without restriction, and with equal decision is forbidden when the instrument marks a reduced heat. Dr. Jackson, on the contrary, conceives the bare circumstance of temperature extremely fallacious; every concomitant symptom is with him important. The heat he determines by sensation; but in all those cases in which any particular organ is affected by inflammation or congestion, or even where the actions, by which life is supported, seem too languid to be consistent with the due functions of the organs, evacuation was premised in a degree proportioned to the symptoms and the effect produced. If the skin was cold and insensible, the warmth and sensibility were roused by warm bathing and friction.

We have next a comparative review of the success of this practice, under our author, and the authority of other writers on the same subject. A long note is annexed on the propriety of some arrangement in the West Indies, by which newly arrived medical men may be apprised of the peculiarities of climate, and its influence on those who are consigned to military employments. This part of the work concludes with a further vindication of the author from Dr. Currie and the Edinburgh Reviewer.

[To be concluded in our next.]

Report of the Diseases of Edinburgh, for May 1808; *by* Mr. JOHN ROBERTON, *Surgeon.*

During the first four days of this month, we had frequent showers of rain, succeeded by cold easterly winds, which, as usual in this city, when the wind blows with any degree of violence from that quarter, was attended with fogs, particularly towards the afternoon. About the end of the first week, the thunder was for two days almost constant, immediately succeeded by excessively heavy rains and

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hail, and the cold easterly winds which had subsided, seemed again to prevail, which rendered the weather very unpleasant. It was supposed by those whose business it is more particularly to attend to these matters, that the uncommon falls of snow which lately took place in this part of the world, at such an advanced period of the season, would prove very injurious to vegetation, and consequently render our crops not only later than usual, but that they would completely destroy a great porportion of them. The wonderfully rapid progress, however, which vegetation made, immediately after the general thaw, which took place last month, yielded an additional proof, that early vegetation with us is uniformly attended by greater chances of suffering from our frequent cold, and often rapid changes from hot to cold days, during the months of March, April, and even May, than when, as in the present season, the uniform gloom of winter has been protracted to an unusually late period. It was likewise supposed that the thunder, hail, and rain, about the beginning of the present month, would contribute very much to the destruction of the tender fruit, &c.; but, independent of all these seemingly unfavorable occurences, our fields, have not, for many years past, displayed a more beautiful appearance, or yielded such a prospect of luxuriant crops as they now, all over this part of the country, exhibit. Near the middle of the month the weather became enchantingly fine, and for several days the thermometer stood high. About the last third of the month, however, cold easterly winds again annoyed us; and the barometer, which, although low about the beginning of the month, had risen considerably during the few good days we experienced, now fell very fast, and heavy rains again began and continued for two or three days. After this, however, till the termination of the month, the weather, during the day, continued tolerably warm, but the nights were cold and disagreeable.

Athough the Ophthalmia, mentioned in my last Report, was, indeed, very general while it lasted, and, in some instances, very severe, it rapidly abated in its violence about the beginning of the present month; and before the end of the first third of it, scarcely any cases of this disease occured in practice.

I took notice of a distinction between the violence of its effects in scrofulous patients, and those in whom no such state of the system could be traced. With some patients of the former description, I have met with cases of Ophthalmia, not so violent in their nature, as extremely tedious in their

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their removal. After the inflammatory symptoms seemed nearly abated, the eyes often remained long unable to perform their healthy functions. Distinct red blotches appeared on various parts of the balls of the eyes, as if occasioned by the rupture of small blood vessels; and a constant and very plentiful discharge of a thin watery fluid, often so acrid in its nature as to irritate the neighbouring parts, was discharged from the eyes, which proved very troublesome. In such patients I have not experienced much benefit from a continuance of the same treatment which I recommended in my last Report, and which I advised during the active state of the inflammation in such complaints. The repeated application of blisters, as near the affected eye as possible, has, among my patients, proved of greater service, with the addition of the daily use of cold sea-bathing. This last advantage, viz. sea bathing, opportunities of which, from our local situation we possess in so eminent a degree, is certainly of the greatest utility, as well to the healthy as to the convalescent. We can, in about two hours, in a very gentle walk, from almost any part of Edinburgh, reach the sea, bathe, and return sensibly invigorated by it. For those whose complaints, or general state of constitution, require warm sea-bathing, we are most conveniently accommodated at Porto Bello, on the sea shore, about three miles from any part of the city. These, with the pleasant lodgings and delightful scenery on every hand, render such a situation invaluable. One disadvantage, however, which I hope will soon be remedied by the proprietors of these bathing places, is the complete want of proper accommodation for those who wish to enjoy the benefit of bathing without being exposed to every person. Bathing machines are, indeed, provided; but, while employed, they are are so closely huddled together that the bathers seem to belong to one party. Our southern neighbours are much better accommodated than we are with these machines, in the comparatively dirty bathing in some parts of the Thames. By carrying the same principle adopted by them to a greater extent, viz. that of attaching a canvas covering to one end of the machine, we might be still more effectually prevented from making a public exhibition of ourselves than they are. In short, whilst bathing, by this very easy plan, a whole family, or any individual of it, may command any extent of room, while they completely prevent what I here complain of; and the expence of such an equipage would be so extremely trifling, as to preclude the necessity of excuse

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in that way. I hope, if this custom be not generally adopted, those gentlemen, with families, who frequent our bathing places, will, upon this principle, or any other that may seem to them better calculated to answer the end I have proposed, set an example to others, which will prevent many, particularly females, from urging those scruples against sea bathing, which I know are very common in this, as, I believe, in every other place similarly circumstanced. Were such measures adopted here, and the plan made generally public, I have no hesitation in saying, that the neighbourhood of Edinburgh would become one of the most fashionable bathing places in the island. The lodging and living of every description are, comparatively speaking, cheap, excellent, and in the greatest variety; and the fresh sea breeze, with the rural walks, may, in the course of a few minutes, be changed for those gay circles of beauty and fashion which the city of Edinburgh can so justly boast of. Thus every description of individuals, of whatever way of thinking, may frequently, in the course of the same day, be alternately gratified with every different sort of pleasure of which the human mind is susceptible.

Almost immediately after the excessively heavy falls of rain, which occurred near the beginning of the month, inflammatory complaints, particularly Pneumonia and Enteritis seemed to recur in many instances with considerable violence.

Blood-letting, with the administration of saline cathartics, in both these affections, was had recourse to with very good effect. In some cases, however, where the patient was of a weakly habit of body, I have preferred the application of a large blister to the abdomen or chest, as these parts happened to be individually affected. From this caution I have derived the greatest success, which to me is the most satisfactory proof of the necessity of greater attention being paid than is at all times done in practice, to many little particulars, not only connected with the existing disease, but with the habit of body, manner of living, &c. of the patient for a considerable length of time, previous to his being affected with such complaints. The physician who prescribes, without attending to these cautions, is a mere mechanic, and totally unworthy of public confidence in the line of his profession. The blister, under the above circumstances, a few hours, or even a day after it has been applied, accelerates the pulse, and renders it fuller; but this soon abates, and relief of the symptoms

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is almost always obtained. I have, about this time, particularly observed, that a great proportion of those children, previously very much debilitated by the measles, were peculiarly liable to inflammation of the bowels. In such cases, blistering alone was found serviceable. I have heard of some cases in which bleeding was employed, the effect of which was want of that success, which it is the wish of every medical man should attend his prescriptions. One complaint, as in the present instance, seems to predispose the system to the attack of another, sometimes nearly similar to the formet, sometimes of an apparently different description. Parts in a state of morbid action, or in any way debilitated by any previous disease, seem, during certain epidemics, more particularly liable to be affected in a very severe degree, than almost in any instance where such epidemics attack parts apparently sound in other respects.

These insidious diseases may sometimes lurk in the system without being detected, as happened in the following case: the patient, aged 40 years, was remarkably stout, and apparently enjoyed a state of good health, though for some years past he has been subject to frequent attacks of colic, and also to diarrhœa. His last illness was only of six days continuance. The symptoms were those usual in inflammation of the bowels, only that the costiveness was more obstinate. On opening the body, the ileum, where it terminates in the colon, for about six inches in length, was found surrounded with a scirrhous tumour, which besides completely obstructing the passage, was greatly inflamed, and around its edges gangrenous, being covered with a blackish coloured matter, and having lost its tenacity so as to be easily penetrated by the pressure of the finger. The inflammation had extended to those parts of the intestines which were contiguous to the seat of the disease. One of the mesenteric glands was swelled to the size of a pigeon's egg; none of the other viscera were at all diseased. As, from the symptoms of the above patient, during his last illness, no such affection as that of which he died could be suspected, it furnishes us with an additional proof of the extreme caution which at all times ought to be observed in forming our prognosis of *any disease.*

No. 4, *St. James's Street.*

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An Account of Diseases in an Eastern District of London, from May 20, to June 20, 1808.

ACUTE DISEASES.		Vomitus	2
Typhus	2	Enterodynia	3
Ephemera	5	Dysuria	2
Rubeola	3	Fluor albus	5
Pleuritis	2	Menorrhagia	4
Rheumatismus Acutus	3	Rheumatismus Chronicus	10
CHRONIC DISEASES.		PUERPERAL DISEASES.	
Tussis	9	Menorrhagia Lochialis	4
Tussis cum Dyspnœa	12	Dolores post partum	7
Hydrothorax	5	Rhagas Papillæ	3
Anasarca	7	Hæmorrhois	2
Ascites	5	INFANTILE DISEASES.	
Cephalalgia	7	Aphthæ	7
Paralysis	2	Ophthalmia	3
Vertigo	5	Vermes	2
Dyspepsia	5	Herpes	4

There have been several cases of Aphthæ amongst children, some of which have proved troublesome and obstinate. This disease is so familiar to those who have the care of new-born infants, that every nurse supposes herself capable of curing it. It is sometimes a very slight disease, appearing only in a few white specks in different parts of the mouth, and disappearing without the assistance of any medicine. It is often, however, protracted by an injudicious attempt to cure it.

Rubbing the mouth with a rag-mop, as the nurses terms it, must be painful to the child; and if it removes the present appearance of the white specks, it is likely to be succeeded by another crop, which may be more troublesome and more difficult to cure.

In one of the cases referred to in the list, this complaint occurred to a child that had been much indisposed for some time, and it seemed to prove critical, as it was succeeded by a more confirmed state of health than it had before enjoyed.

This disease is in general most effectually removed by keeping the bowels moderately open by the use of some gently laxative medicine.

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INTELLIGENCE.

Mr. DAVY, in the concluding Lectures of his Course at the Royal Institution, gave a distinct and very luminous exhibition of his grand discovery, the decomposition of the alkalies. His first experiments were with potash and soda, which in their dry state are non-conductors, but when moistened, they have the property of conducting electricity. In both instances he clearly produced metalline substances, by bringing them within the action of the Voltaic battery. Oxygen was given out at the positive side of the battery, and at the negative little globules of the metallic base were instantly formed. The metalline bases of the alkalies he named POTASSIUM and SODAIUM, chusing the termination *um*, in compliance with the present nomenclature of metals, in order that they might agree with Platin*um*, Plumb*um*, &c. &c. These new metals, to appearance, are precisely like mercury, but very different from that metal in their various properties, which he enumerated and demonstrated to the satisfaction of every one present. He shewed the great inflammability of the new metals, by touching them with the smallest quantity of water, when they instantly took fire. They are both malleable at the common temperature, and may be spread into very thin leaves on a plate of glass, by mere pressure. So great, however, is their attraction for the oxygen of the atmosphere, that they almost instantly became tarnished. Before the discovery of these new metals, only two bodies of this class, viz. iron and platinum, were capable of being welded, and that at a very great heat, whereas separate parts of the Potassium and Sodaium can be united readily at the common temperature of the atmosphere. The specific gravity of the Potassium, is to that of water as about six to ten; in the case of sodaium, it is as ninety-three to one hundred. Mr. Davy shewed, that the metals which he had spread on glass, were easily fusible again by the heat of a spirit lamp, by the application of which they almost instantly run into globules. The attraction of these new metals for oxygen, was shewn by their burning at a red heat, when the alkalies were again revived. In analyzing them with great accuracy, he found the potash contained fourteen parts of oxygen and eighty-four of metalline base, but the soda contained twenty parts of oxygen to eighty of base. These metals introduced into a jar of oxy-muriatic gas spontaneously took fire, and the white fume collected on the glass was in the one case muriate of potash, in the other muriate of soda, or common culinary salt. Particles of the new metals put into water, decomposed the water, and gave out a brilliant light. The water used was pure distilled water, which instantly after the decomposition of the metals, shewed by means of turmeric paper, that it was become highly alkaline. The same sort of action

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action was exhibited by the nitric acid; and the potassium acted also on the sulphuric and other strong acids. Mr. Davy placed small particles of the metals on ice, and they immediately decomposed the water and gave out a bright light: alkali was likewise formed on the ice.

These metals unite with mercury and form solids; thus, one part of sodaium and three of mercury being mixed, the two fluids united in a state of solidity. Several other experiments were made, and the Professor felt no hesitation in giving his opinion as to the great importance of these discoveries in their application to the arts; and even to an art, which he doubted if he should venture to mention, the art of war, as the destruction occasioned by these metals, if they could be brought into action, would be considerably greater than by those now in use. In reference to the detail of his own discoveries, he said the present state of knowledge was more likely to produce in him humility than exultation. The experimentalist was not the hero of his own tale, but he could not avoid being the subject of it; and he hoped the experiments and facts exhibited, would be considered independently of any opinion which he had divulged in connection with them. In the present imperfect state of enquiry, it would be presumption to expect that any thing would be permanently established. Alluding to the great powers of the Voltaic battery,* he said, some might imagine that the desideratum of the Alchemists was accomplished, and that the delusive hopes of those visionaries were, at length, realized: but it ought to be remembered there was an immense interval betwen the processes of combination and decomposition; that the proper province of chemisty extended but to inorganic matter; that in the powers of combination other agents were employed, with whose nature we were wholly unacquainted, and to whose operation we might for ever remain strangers.

Mr. Davy, having shewn his experiments on the fixed alkalies, proceeded to Ammonia, which, from the manipulations of Priestley and Steele, was regarded as a compound of Hydrogen and Nitrogen: he had, no doubt, in his mind, that it contained also a portion of oxygen. This he attempted to demonstrate by experiments, particularly by passing some ammonia, in a state of gas, through a porcelain tube, heated to a white heat; the hydrogen and nitrogen were collected, and in the glass vessel through which they passed, moisture was very apparent, which he felt satisfied was water, formed by the oxygen contained in the ammonia. Hence he inferred, that though oxygen had hitherto been considered as the acidifiable principle only, it would be found to be the alkalizing principle likewise.

From the alkalies he proceeded to the earths, which he enumerated

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* Mr. Davy's battery contains thirty-eight thousand square inches of metal plates.

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rated and described, and which he considered as the link between the alkalies and metallic oxides; and he had no doubt that they would hereafter yield to some higher powers of the Voltaic battery, and exhibit the parts of which they were composed. On Barytes he then made an experiment, shewing very decisively that it contained an inflammable principle. He was next led to consider the phænomena of meteoric stones; and the light occasioned by them; Mr. Davy adds, were now perfectly explicable by the facts just discovered; but as to the place whence these bodies came, he gave no opinion, only that from the curves which they described, it was certain that they came from some other world, and were travellers only in our atmosphere; for if they had been formed there, their descent must be perpendicular to the surface of the earth, which, it was known, was not the case. The Professor then referred to the several substances that had hitherto been deemed simple; supposing that all might, hereafter, be decomposed, in sulphur and charcoal, it was now known there was hydrogen; he seemed to suspect that the two great principles operating in nature, were the principle of inflammability and a metallic principle.—It is our intention in a subsequent Number, to give a more detailed account of the discoveries of this learned chemist, which cannot fail to be highly interesting to every lover of science, and more particularly to those who having attended the lectures at the Royal Institution, will be glad to have the facts and experiments there exhibited, brought again to their recollection.

M. Le Lievre, a member of the national Institute of France, has discovered in the Island of Elba a new mineral, to which he has given the name of Jenite, in honour of the battle of Jena. It is opaque, of a black colour, sometimes inclining to brown, and is nearly four times as heavy as distilled water. From the analysis of Messrs. Vauquelin and Descotils, it appears that this mineral contains rather more than half its weight of iron, mixed with a little manganese, and that the rest of the stone is lime and silex, the proportion of the silex being considerably more than double that of the lime.

Dr. Joseph Reade has published an Account of an Experiment, the result of which is in direct contradiction to the received opinion, that the agitation or friction of fluids cannot excite sensible heat. It is as follows:—The temperature of the apartment being 40°, half a pint of water at a similar heat, was poured into a tin bottle-shaped vessel, into the aperture of which was inserted a thermometer surrounded with chamois leather, and made to fit accurately, with its bulb nearly in the axis. After briskly agitating the vessel for a few minutes, to his great surprise he found that the temperature of the water rose eight degrees; and, even after the apparatus was uncovered and laid at rest on the table, the water continued to rise for several minutes: proving the origin of the heat to be inherent in the fluid, and independent of any external causes. Anxious to obviate every source of fallacy or objection,

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tion, Dr. Reade prevented the communication of caloric by his hands, or of radiation from his body, by coating the tin vessel with many layers of woollen cloth carefully wrapped round it, over which there was a tin case, the entire nearly two inches in thickness, and covered externally with three wet towels. In the course of the experiment he dipped his hands frequently in snow water, and also sprinkled the towels. The Rev. Mr. Hincks, lecturer on chemistry in the Cork Institution, to whom the experiment was communicated, on repeating it in a glass bottle, found the heat of the vessel, by means of a thermometer placed between it and the covering, to be inferior to that of the enclosed fluid, and on a par with the atmosphere, which proves in a most satisfactory manner that there could be no communication of caloric from the hand.

According to some cruel, though interesting, experiments, reported to the French Institute by M. DUPUYTREN, principal Director of Anatomy at the Medical School, and M. DUPREY, Professor at the Veterinary School at Alfort, on the subject of respiration; it appears, that the section of the two nerves of the eighth pair (those of the stomach and breast) in animals, is certain and instant death; and that respiration, the most important function of life, is exercised directly under the power of nervous influence, and is inseparable from it.

In the course of this month will be published, a Supplementary Volume of Birds to BARR's Edition of Buffon. From the splendid edition of Buffon's Works, with additions lately published by SONNINI, has been selected every article of importance or of curiosity; and several new plates of rare birds will accompany this volume, the contents of which will bring down the era of discovery in this interesting branch of Natural History to the present day.

Dr. GEORGE ALLEY, of Cork, has nearly ready for the press, Observations on the Hydrargyria, or that peculiar species of eruptive disease which arises from the exhibition of mercury; to be illustrated with coloured engravings. This publication will contain all the information on this singular and interesting disease, which the observations of those gentlemen whose attention has been particularly directed to the subject, have afforded; besides what the author was enabled to collect during an attendance of more than six years on the Westmoreland Lock Hospital, Dublin.

Dr. REID, the author of the Reports of Diseases inserted regularly in the Monthly Magazine, intends to collect those which have appeared hitherto, into a small volume, to be published early in the winter, printed uniformly with his Treatise on Consumption.

NEW MEDICAL PUBLICATIONS.

The Vaccine Phantasmagoria, 2s.

The Vaccine Scourge, No. I. 1s.

Important Researches upon the Existence, Nature, and Communication of Venereal Infection in Pregnant Women, new born Infants, and Nurses; by the late P. A. O. Mahon.

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THE

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Mr. WALKER'S INTRODUCTORY LECTURE TO HIS COURSE OF PHYSIOLOGY;

EXHIBITING THE NATURAL ARRANGEMENT WHICH HE HAS PROPOSED FOR THAT SCIENCE, AND CONTAINING SOME OF ITS FIRST PRINCIPLES.

Delivered at Edinburgh in May 1808.

THE functions of man are the most interesting objects of science. Physics and morals are equally involved by them. It is in them that the physical sciences terminate, and that the moral sciences have their origin.

Of what avail are the former but to develope the influence of external bodies upon the functions of man? What are the latter, but the results of the reaction of that influence upon men in society?

To explain them is the business of physiology; and if it have hitherto failed in doing so; if it have even neglected the noblest of all the functions, I should say the noblest branch of philosophy, the intellectual functions of man, and have abandoned them to persons totally incapable of developping them, because totally ignorant of the structure on which they depend, and who have left them in a state of greater obscurity than that in which they found them, that is the fault of physiologists and not of their science.

In these Lectures, I shall at least be influenced by the deepest sense of such errors.

But it is not merely the philosophy of the human mind, or rather of the intellectual functions of man, that have thus been abandoned to barbarism; I shall endeavour to shew that it is by the aid of physiology alone, that in explaining the functions of the eye, we can render perfect the theories of colour and of vision; that, in explaining the functions of the ear, we can construct rational ones of phonics and of hearing; that, in explaining the functions of

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the organ of voice, we can illustrate the formation of letters and the origin of languages; that, in explaining the functions of the muscles, we can establish those first principles of taste in the fine arts, the very existence of which have so often been questioned, and so deliver a theory of movement and of attitude applicable to sculpture, the higher species of painting, gesture in oratory, &c.; in fine, it is by physiological means only, that we can construct a natural theory of medicine, and render precise and easy the most delicate and the most difficult of the operations of surgery.

To effect these purposes, nothing is more necessary than arrangement, because it at once involves facts and their theory, or the reasonings founded upon them.

In considering a natural arrangement of Anatomy and Physiology, it appears to me an unquestionable point, that it ought to indicate, at a single glance, the relation of all the functions to, and their dependence upon, each other. It is upon this principle that I have constructed the natural arrangement which I am about to detail; and a single remark on the arrangements adopted by the most celebrated modern Physiologists will, at once, shew the originality of the plan which I propose, and point out the errors of arrangement, which I deprecate.

Blumenbach, Chaunier, Dumas, and Bichat, treat of circulation before absorption, on which it depends, and even before mastication, deglutition and digestion, on which, in general, even absorption itself chiefly depends. Thus, by arranging effects in the place of causes, they confound the relations of the functions, and reverse the very order of their dependence.

If the arrangement of Chaunier in particular who, in this respect, is as accurate as any of them, were to be considered as indicating the relation and dependance of the functions, so absurd is it, that absorption, instead of the cause, would be the result of nutrition, generation the result of absorption, and digestion the result of generation.

The division of the functions into external and internal, as anciently proposed by Aristotle, and afterwards successively adopted and improved by Buffon, Grimaud and Bichat (the last of whom substituted for them the terms organic and animal,) is still more faulty. No class of the functions is either exclusively external or internal. Impressions from external objects are without, but the operations of mind are within; circulation is within, but cutaneous absorption is without.

Anatomy,

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Anatomy, I divide into three parts; namely, that which considers the mechanical or loco-motive organs; that which considers the vital organs; and that which considers the intellectual organs.

Under the mechanical or loco-motive organs, I class, first, the bones which support the rest of the animal structure; second, the ligaments which unite them; and third, the muscles which move them.

Under the vital organs, I class, first, the organs of digestion, the absorbent surfaces and the vessels which absorb from these surfaces; second, the heart, lungs, and blood vessels, which derive their contents (the blood) from the absorbed lymph; and third, the organs of secretion, which separate various matters from the blood. Then follow the generative organs, which, though commonly formed into a distinct class from the vital, ought not, by any means to be so reckoned. For it is evident that they form, as it were, the sequel of the vital organs, being dependant on secretion, the last of the vital functions, and destined merely to propagate vitality, and to communicate it to a new series of beings.

Under the intellectual organs, I class first the organs of sense, where impressions take place; second, the brain or organ of judgement, where these excite ideas; and third, the nerves, where volition results from the last.

This is a natural arrangement of the anatomy of animals, and its peculiar simplicity is illustrated by its involving, in its application, that of minerals and vegetables, and by its being capable of instant adaption to physiological science.

In order to arrange Animal Physiology, it is only necessary to substitute the term "Functions" for "Organs", and that science will likewise involve, in application, the physiology of mineral and vegetable bodies, and be, in its term, capable of instant adaption to medical science.

Thus the functions also are divided into mechanical, vital, and intellectual.

The mechanical functions are sub-divided into that of support, that of connection, and that of loco-motion.

The vital functions are divided into that of absorption, that of circulation, and that of secretion.

The intellectual functions are divided into that of sensation, that of mental operation, and that of volition.

A circle of functions, I may observe, thus exist in animals which exist not in minerals or vegetables, because volition, the last of the intellectual functions, connects itself to the mechanical ones by rendering them subservi-

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ent to it in loco-motion. Thus the first and the last of these actions are as intimately connected as any of the intermediate ones, and a beautiful circle of organic function and influence is formed.

In order to arrange Medical Science, for the term "Healthy Functions", the subject of physiology, it is only necessary to substitute the term "Diseased Functions."

The classes of disease are, therefore, like those of anatomy and physiology, three, namely Diseases of the Mechanical or Loco-motive Functions, Diseases of the Vital Functions, and Diseases of the Intellectual Functions.

The orders of the first class, as affecting the functions of the bones, the ligaments and the muscles, are three, viz. Diseases of Support, Diseases of Connection, and Diseases of Loco-motion.

Those of the second class, as affecting the functions of the absorbent, circulating, and secreting vessels, are likewise three; viz. Diseases of Absorption, Diseases of Circulation and Diseases of Secretion.

Those of the third class, as affecting the functions of the organs of sense, of the brain and of the nerves, are also three; viz. Diseases of Impression, Diseases of Judgment, and Diseases of Volition.

The genera, under each order, consist of Diseases of diminished, irregular and increased functions.

This arrangement of disease likewise involves, in application, that of minerals (if we choose to maintain the analogy, and to give that term to mere injury of structure) and of vegetables, as well as animals. The first have what may be termed Diseases of Mechanical Organs; the second have Diseases of Mechanical and Vital Functions; whilst the third have Diseases of Mechanical, Vital, and Intellectual Functions; corresponding with the observation, that minerals exist; vegetables exist and live; and animals exist, live, and think.

Precisely in the same way would I class the articles of the Materia Medica; first, as operating upon the mechanical, vital, or intellectual organs; and then as either diminishing, rendering regular, or increasing their action.

In this natural arrangement, it will be observed, that all its parts correctly correspond and beautifully flow from each other; while anatomy is the basis of physiology, physiology, in its turn, is the basis of medicine; the classification of one is applicable to the rest, and all of them at once involve mineral, vegetable, and animal nature.

Such arrangement, as it lays the foundation of a new system

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system of each, will, I trust, soon shed some light over anatomical, over physiological, and particularly over the dark paths of medical science. But it must be remembered, that this exhibits merely a sketch of the application of my General Arrangement to Medical Science, and that sketch necessarily brief, and deprived of every illustration. Yet even after this sketch, I think I may add, in the words of Lord Bacon, "that the harmony of a science, supporting each part the other, is, and ought to be the true and brief confutation and suppression of all the smaller sort of objections."

The Plan of the Course will therefore be precisely the same with that which I have proposed for Anatomy and Physiology in general.

I. In that part of the Course which relates to the mechanical organs and functions, will be explained, the structure and uses, 1st. of the bones which support the rest of the animal machine; 2d. of the ligaments which unite it; and, 3dly, of the muscles which move it.

II. In the part of the Course which relates to the vital organs and functions, will be explained the structure and uses; 1st, of the organs of mastication, deglutition, and digestion of the absorbent surfaces, and of the vessels which absorb from these surfaces; 2dly, of the heart, lungs, and blood vessels, which derive their contents (the blood) from the absorbed lymph; and, 3dly, of the organs of secretion, which separate various matters from the blood. Throughout this division, in particular, the analogies from vegetables will be explained.

III. In that part of the Course which relates to the intellectual organs and functions will be explained the structure and uses; 1st, of the organs of sense, which receive impressions from external objects; 2dly, of the brain, where these impressions excite ideas; and, 3dly, of the spinal marrow and nerves, where volition results from the last. In this division will be also explained, as founded upon original observations, certain criteria of the various degrees of the sensative, perceptive, and voluntary powers possessed by different animals, as well as the nature of sensation, perception, and volition themselves.

In considering the application, or rather the relation of physiology to philosophy in general, the last mentioned points, with regard to the philosophy of mind, will be particularly dwelt upon.

In considering the application of physiology to the fine arts, the errors in the construction of the antique statues,

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and those of Michael Angelo, both with regard to the individual muscles supposed to be brought into action, and with regard to a hitherto unobserved principle of attitude, will be carefully pointed out.

In considering the application of physiology to the medical and surgical art, a view of a new, simple, and impressive natural system of medical science in general, and of its first principles as an art, will be exhibited, and rules will also be given for performing surgical operations with the utmost precision and ease, upon the principle of an invariable relation between the arrangement of internal and the situation of certain external parts, which consequently form accurate signs of their situation.

No part of the medical art is at once so difficult and so important as this last; nor has any part of it hitherto been so strangely neglected. The lecturer on anatomy thinks this not his duty, because it is of too practical a nature; and the lecturer on medicine thinks it not his, because actual demonstration is foreign to his business. Thus has a part, by far the most important of all medical science, been completely abandoned.

Every other department of medical science may also be more easily studied in private than this individual part of it possibly can, because every other department of it is incomparably more independant of actual demonstration. In short, the utter impossibility of any gentleman who has not practised in this way, ever performing surgical operations with precision and ease, is too obvious to be for a moment dwelt upon.

I think that an exposition of the common errors, a clear explanation of a few original and fundamental principles, and the actual performance of operations upon these principles, will decidedly effect these important purposes.

It is of importance to state, that, by means of this arrangement, notwithstanding the shortness of the Course, not one important fact of anatomy, which can form a basis for physiological reasoning, nor any part of physiology itself, will be omitted.

By adopting this arrangement, therefore, we shall not merely be able to detail a greater number of facts in anatomy, even during a three months course, than can otherwise be in one of six, but we shall be able to deliver all the still more interesting reasonings of physiology, which, though, in general, almost entirely neglected, are more important both to the surgeon and the physician. In truth, anatomy is valuable only as it constitutes their basis.

As,

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As, in physiological inquiries, comparative anatomy and comparative views alone can destroy an hypothesis or transmute it into a theory, I shall, throughout the Course, introduce all its principal facts.

The Lectures will consequently consist of Three Parts, each department of physiology being preceded by a view of all the important corresponding facts of human and comparative anatomy, and succeeded by references to their pathological application, in such a manner, as at once to render obvious to the student the facts of anatomy, to impress upon him the important reasonings of physiology, and to exhibit to him a view of a new, simple, and impressive natural system of pathological science in general.

I shall also endeavour to render these Lectures interesting to the student in general science, as well as of medicine; and, in order to facilitate this object, I shall not introduce in them any theory of physiology, until a clear and satisfactory view has been given of the facts of anatomy, on which it may depend.

I may now observe, that the series of beings which the arrangement I have just delivered involves, all, more or less, evidence the phenomena of life and intellect as well as exhibit structure, and may conclude with a few observations concerning these phenomena.

Minerals have properly been said to exist; plants to exist and live; animals to exist, live, and think.

These are all modifications of each other, as I shall afterwards show; but at present, I shall limit my observations to the two last of these classes, and to the additional phenomena; namely, those of life and intellect, which they more strikingly exhibit.

I shall not, however, like some of the most celebrated modern physiologists, occupy my preliminary Lectures, with long details concerning their nature; but, as I reckon life to be the mere result of organization, I shall, throughout the Course, illustrate it in connexion with those organs on which it depends, and shall, at present, only take a general view of their nature.

Life is a term which some philosophers have hitherto inaccurately employed as expressing an imaginary principle, though it merely designates a series of dependent actions. This they were, doubtless, induced to do by that artifice which has ever induced weak men to assume an air of knowledge, by giving a particular name to what they did not understand; and the same artifice still induces

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such persons to blame those who endeavour to explain the phenomena of life according to obvious physical laws, precisely because a successful explanation would at once exhibit their ignorance and their desire to conceal it.

Life has, with equal absurdity, been termed a forced state, though it merely evidences a series of phenomena in justest unison with those of the universe. I dissent therefore from those who assert that we employ the terms *life*, and *vital force*, to express what are at least apparent exceptions to general laws. This is only a repetition of the error of Brown. It was only, however, an erroneous conclusion from accurate observations.

"For example," says Cuvier, "let us contemplate a female in the prime of youth and health. That elegant voluptuous form; that graceful flexibility of motion; that gentle warmth; those cheeks crimsoned with the roses of delight; those brilliant eyes, darting rays of love, or sparkling with the fire of genius; that countenance enlivened by sallies of wit, or animated by the glow of passion, seem all united to form a most fascinating being. A moment is sufficient to destroy this illusion. Motion and sense often cease without any apparent cause. The body loses its heat; the muscles become flat, and the angular prominences of the bones appear; the lustre of the eye is gone; the cheeks and lips are livid. These, however, are but preludes of change still more horrible. The flesh becomes successively blue, green, and black. It attracts humidity; and while one portion evaporates in infectious emanations, the other dissolves into a putrid sanies, which is also speedily dissipated, In a word, after a few short days, there remains only a small number of earthy and saline principles. The other elements are dispersed in air and in water, to enter again into new combinations."

This, he adduces as a proof, that the possession of life prevents the operation of external physical causes. The picture is perfectly correct, but the conclusion unauthorised.

It was, indeed, impossible for us not to feel the frequent necessity of deploring the early fate of those we loved. We, therefore, thought we perceived this principle operating, when the evident influence of external causes, or some mysterious agency, seemed to drive the noblest results of life, intellect and genius, from the philosopher and statesman, who had, by the diffusion of truth, and resistance to arbitrary power, preserved the liberties, and aggrandized the happiness of nations; we thought we perceived their influence

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influence when imagination's powers fled from the poet, whose song had once almost conferred new life on the heroes of ancient times; we thought we perceived their influence when the phenomena of vital action disappeared in the body of the patriot hero, in whom they had once developed the noblest specimen of that generous love of social life which induced him to devote his existence to his country's weal; we thought we perceived their influence when those magic charms abandoned the lovely female, whose powers had once excited even from the philosopher those splendid epithets that ranked her with the other objects of his adoration, celestial truth and godlike genius; which had obtained even from the poet those wonderful strains that at once immortalized him and the object of his song; which had commanded even in the hero those glorious devotions which, for far too short a period, illustrated the ever memorable days of chivalry.

When those eyes, whose soft languor had fascinated every beholder; those cheeks, where life had often spread the crimson veil of love: when these were gone, those eyes were dim and sunk, those cheeks were pale, those lips were livid, that bosom depressed, that form rigid and icy cold: when all had thus assumed the darkest and most frightful hues, had gradually lost cohesion, and become one mass of horrible putrescence, where infectious effluvia now threatened destruction, almost welcome, to those who once adored the animated being,—it was scarcely possible to feel all this and avoid the conclusion that life was a state of force.

It was doubtless this unknown and imaginary power connecting the various phenomena of organic structure, that gave origin to the idea of life. But that they are no state of force is proven by this, that while the only notion we have of them is motion,—successive attraction and repulsion, electricity, fire, &c. exhibit precisely corresponding phenomena; and the last of these was, I believe, on that single account, considered as the symbol of life and intellect by the great Zoroaster.

This and similar facts convince me, that the earth has, myriads of times, been illumed by the highest attainments of intellect, and as often plunged in darkness. This single point of Indian philosophy was, in my opinion, but the mere shadow of the highest excellence in philosophy in general; and, as the greatest cultivation of the human mind, and the greatest misapplication of its faculties, cannot well exist together, I am equally convinced, that the beautiful

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beautiful specimens of art, blended with heterogeneous absurdities in the monuments of Upper Egypt, afford the most striking proof, that, contrary to the common assertion, there *were* periods in that country when tyrants held no despotic sway over the physical, nor *false* priests over the moral structure of man.

But to return to the subject. True it is, that the affinities of external agents with the molecules of organic bodies are precisely the same during life, when their influence is resisted, as after death when it operates with the greatest energy; but the power which, during life, organic bodies possess of resisting the influence of external agents, and even the extension of the sphere of their action beyond the mere bounds of the living body, is, in my opinion, very easily accounted for.

All the particles of matter possess attraction and repulsion, and the largest homogeneous masses, cæteris paribus, evidence them most. Hence organic bodies, while they posess homogeneity by the subsistence of intimate relations between their parts, evidence attraction and repulsion in the highest degree. While, in infancy, these relations are merely forming, the powers of attraction and repulsion are weak; when, in the vigor of life, these relations are most intimate, these powers are greatest; when, in old age, these relations are interrupted, these powers are also diminished; and when, in death, these relations cease to exist between the molecules, or, in other words, when the body is no longer organized, the power of resistance terminates.

Thus life is no forced state, but an intrinsic power arising merely from the intimate relations of these molecules, and the greater effects which, in such combination, they are capable of producing, than when, in death, they have become independent of each other, and their powers, disunited, are capable of much less effectual resistance.

Thus it is that I would endeavour to show a connexion between the phenomena of living bodies and the general laws of nature.

This general and common motion of all the parts, says Cuvier, forms so peculiarly the essence of life, that the parts which are separated from a living body soon die, because they possess no motion of their own, and only participate in the general motion produced by their union. Thus, according to the expression of Kant, the mode of existence of each part of inanimate bodies belongs to itself, but, in living bodies, it resides in the whole. When I say

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I say that life consists in motion, I make no assertion derogatory to the Deity, for every philosopher is of opinion that motion is to us as mysterious as life. At all events, it would be dishonest of me to give my sanction to opinions respecting a difference which seems to me not to subsist. The same causes which terminate motion terminate life. Life begins by motion, and terminates when it ceases; but very curiously it also terminates in consequence of it.—In other words, the motion wears out the machine in which it takes place. For, while the functions are most dependant, life increases; and their very independence, though, to a certain extent, the grand aim of existence, destroys it. The very cause of decay commencing when the different functions have acquired the greatest vigour, arises precisely from their having acquired that vigour, and being, at that moment, most capable of a species of warfare, if I may so term it, with each other, as well as, in some measure, from the greater number of accidents to which a complexity of functions is liable.

That, at this period, the functions may, in a certain sense, be said to combat each other, will be evident to every one who, for a moment, considers, that great exercise of the loco-motive functions uniformly interrupts the vital and intellectual, or of the vital functions injures the loco-motive and intellectual, or of the intellectual functions injures the loco-motive and vital.

These powers are always in an inverse relation to each other.

Grimaud, says Richerand, has given the most extensive development to this idea, of the constant opposition between these two series of actions, over which preside, according to the opinion of this physician, two powers, which he calls loco-motive and digestive. It is marked in no species of animals more than in the carnivorous, which connect with senses abounding in stratagem, and muscles capable of extraordinary action, an assimilating power of so low a degree, that their aliment, in order to be conveniently digested, must possess a composition analogous to that of their organs.

Thus, in my opinion, the independence which the functions acquire, and the interruptions which their operations present to each other, subjects them to the common laws of impeded motion and its result—a separation of parts.

When, in infancy, their unison is most complete, life is most vigorous. When in old age, this unison ceases, life disappears. Hence also I am convinced it is, that those animals whose functions are longest dependent on each other,

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other, and who remain longest helpless, longest enjoy organic existence.

As motion only can result from motion, so life can only result from life. The vital actions of all animals originate in those of their parents, from whom they are detached, precisely when their actions become sufficiently independent of them. I am convinced, it is upon this principle, that the egg is detached from the ovary, and the fœtus from the uterus, as well as because, in these cases, the ovary and the uterus themselves, after long quiescence, recover an independent action of their own. The same power which enables an organic body to act by itself, enables it to separate from another.

Life then seems in a great measure to consist in the successive attraction and repulsion of particles—properties equally common to minerals, vegetables, and animals, though in different manners and degrees. Life, however, is not here to be confounded with sensibility, which nevertheless, I shall afterwards shew is also possessed by all of them. Life seems unseparable from generation, nutrition, and decay, or, in other words, from origin, increase, diminution—a progression which minerals and vegetables pass through as well as animals. Minerals increase by additions to their external surfaces, vegetables by absorbing from without inward, and animals by absorbing from their internal as well as external surfaces

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Should wish, through the medium of your valuable publication, to call the attention of the Medical World to a practice that is adopted throughout the generality of men of war, fraught in my opinion with the most pernicious consequences. It is not my intention to enter into any controversy on the subject; all my aim is, to call out the observations of some more clever man than I am. The practice I allude to, is the unlimited use of adhesive straps in ulcers. To Mr. Baynton, the so successful practitioner in the treatment of ulcers, after this plan, I give every credit; but I am positive at the time he recommended it so warmly to the notice of Surgeons, it was far from his intentions, that

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that it should be so universally adopted as it is at present. By far the majority of ulcers you meet with on board of a man of war, partakes of a scorbutic taint, or are generally attached to scorbutic patients; now I am certain, from my experience in the treatment of those sores, that nothing is so bad as to apply straps of adhesive plaster. When the discharge is copious and of bad matter, I am certain, by compressing the part the ulcer is on, you produce an extraordinary degree of inflammation; you compel the matter which Nature designed should find an exit there, to open an abcess in a more depending part; and by that means, you often have both the old, and this ulcer of your own make, communicate with each other, and by the extensiveness of it, you bring on a discharge highly debilitating to the system of a sailor, who has nothing to support this but a little meal and water for his breakfast, and salt beef; the matter is often absorbed to a more vital post, hectic fever ensues, and your patient is carried off. It will be of no avail to argue from the good effects that have resulted by the treatment of ulcer, after Mr. Baynton's manner; on those where your patient's diet is liberal, the solids have not that tendency to run into a state of mortification you will always meet with at sea; at the same time, I am not an avowed enemy to the practice; on the contrary, no other will be crowned with so much success, when it is adopted at the proper time. I am certain if the practice was not so generally adopted, we should not have the painful sight of seeing men "who have rendered the state some service," wandering about the Streets of London without a leg, imploring your assistance, to bestow a trifle on them to enable them to drag out a miserable existence.

I am, &c.

W. WARNOCK.
Assistant Surgeon, Royal Navy.

Cowsand Bay, June 6, 1808.

REMARKABLE SYMPTOMS *consequent upon an* INJURY *done to the* SPINE, *with Remarks. By* JONATHAN DORR, *Esq. of Cambridge, New York.*

ON the 22d of July, 1794, A— A—, aged 36 years, received a blow across the small of his back by the fall of a tree, which partially dislocated his spine between the first and

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and second lumbar vertebræ, and which produced a considerable tumour, and an obtuse angle of the spine, with an entire abolition of all sensation and muscular action in the lower limbs, beginning on a circular line passing around the ossa innominata exactly over the head of the femur, and two inches above the ossa pubis. This was the lowest line of the least sensation, which was determined by puncturing the parts. As low down as another line, three inches above, sensation and muscular action was entire. From the upper to the lower line there was a gradual diminution of sensation. In this situation I visited him five hours after the accident. By adopting the method Mr. Bell directs, the bones were replaced. Sumulants were directed and applied. I visited him the succeeding day, and found his bladder violently distended, and a retention of fæces, without any more pain than a slight uneasiness about the region of the bladder. After drawing off his urine with a catheter, he became calm. This method of discharging his urine was followed about eight days, after which an involuntary discharge took place; but the rectum has never felt the irritation of distention since, as a manual operation has always been necessary to remove the fæces.

For about three years past his urine has been discharged in the following ways, viz. about one-fourth passed through a sinus, nearly in a lateral direction from the umbilicus, on the right side; one-third through the urethra; and the remainder through the most depending part of the scrotum, through several openings.

I called to see him, as usual, on the 4th of last Sept. at which time there was not the least vestige of a testicle to be felt. This circumstances led me to propose the following question, viz. whether he ever had any sexual inclination for his wife? He declared that idea was as obnoxious to his feeling as if she was of his own sex. I then inquired whether he ever saluted his wife with his lips? He told me that sensation was not entirely obliterated, but nearly so. The first was extinguished suddenly, and the latter progressively; and all the relative duties on his part were performed from a sense of the moral obligation he was under to her, and not from that peculiar affection that formerly made those duties pleasurable.

Mr. A's lower limbs are emaciated to a mere skeleton; his thighs always lying on a line with his body, and his legs longitudinally with his thighs, with his feet so drawn down as to be quite convex on their tops. Notwithstanding this

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this derangement and morbid condition of his lower limbs, above the upper line described before he is full fleshed, and every way firm and healthy as formerly, with a good appetite, and his mental powers as strong and active as ever, and sufficient strength in his arms to move himself out and into bed. To view him, one would imagine the two lines described above are two lines of demarkation, across which no influence could pass.

Does not the gradual abolition of excitement in the lips, following the entire destruction of excitement in the genitals, show the strong connection between those two organs, and help to illustrate the retrocession of the mumps from the throat to the scrotum, when too much exposed to cold, or when repellents are applied? If my patient is correct, how thrice happy are those who have a well-balanced system, that the duties of their lives, through the ills of time, may be made easy! What a weighty argument is this, to add to many others, to urge to strict economy for the preservation of health.

The retrocession of the mumps, or what Mr. John Hunter calls the "remote sympathetic operation," may proceed from two causes: the first from actual direct organical connection, which organical connection may serve as a medium of communication when a disease is repelled or recedes from one part of our system to another: secondly, from parts reciprocally and mutually irritated and excited into correspondent actions. All parts of our system are drawn into mutual consent by the stimulus of food. If this food produces a healthy action in the stomach, the same kind of action will be propagated through the system. From the perpetual stimulus of food, a perpetual correspondence and uniformity of action is kept up until a strong habit is established. This habit, joined to the sympathetic laws of the animal economy, will answer many singular purposes. I will here give one remarkable instance.—Six years ago I was stung by about thirty bees on my face and neck. I suddenly plunged myself into the water (which was at hand) to extricate myself from a general assault of the swarm. I remained in the water about half a minute. I then emerged from it, and instantly grew faint; and, all on a sudden, my whole surface, even to my legs and feet, exhibited all the characters and phenomena which the parts did that were actually stung, even to the puncture of the sting. This circumstance established me in the opinion, that inoculation with variolous matter, the bite of a rabid

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rabid dog, scarlet fever, &c. &c. were all local diseases, and that the system never became contaminated by any of these deleterious matters entering the mass of fluids, and there fermenting and assimilating them to its nature, but by propogating the same kind of action through the system that was begun in the point of insertion. The incipient inflammation will extend on the two principles laid down above, viz. by sympathetic laws, and the habit induced by stimulants.

If the system becomes contaminated by assimilation, I judge the work must commence immediately, and the matter suddenly be transferred to the system. To try the ground of these positions more amply by experiment, I vaccinated two persons; and thirty-six hours after vaccination, when a very slight flush appeared around the margin of the incision but no soreness under the arm, nor any other symptomof absorption, I applied a small bag of wet ashes, which destroyed the spot of puncture. In a few days a piece of dead flesh sloughed out one third of an inch in diameter, and half as deep as broad. Neither of these persons had the cow-pock.

If Dr. Mitchell's doctrine is true, that acids are the base of all poisons, I think there are strong reasons why alkaline escharotics should be preferred, and in a manner that should *rapidly* destroy to a sufficient extent. For it is certainly probable, that *gently* destroying the point of disease may increase excitability, and thereby call into action the inserted virus. The result of my experiment has made me extremely solicitous that some gentleman who may have an opportunity should try the method proposed in one of the volumes of the Medical Repository, of destroying the part bitten by canine rabies. The result of my experiments on the vaccinated persons has greatly strengthened my faith that the plan laid down could not fail of success.

May 23, 1803.

To

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Singular Case of Ischuria; *by Dr.* William Parker, *of Charlston, South-Carolina.*

On the 4th of November, 1801, Mr. Abraham Markley, a young gentleman of this city, aged eighteen years, usually in high health, and of a habit promising to be muscular, was affected with suppression of urine, accompanied with pain in the lower part of the abdomen, and this particularly violent on any effort to pass urine. For three weeks preceding, he thought he had voided it with some uneasiness, and in a smaller stream than usual. He could assign no cause for these symptoms, though it was ascertained, in the subsequent course of his disease, that he had shortly previous to any affection, exerted himself in climbing up a rope, by the action of his hands and legs, the rope passing in a line down his body, and between his thighs; and further, that he had exercised himself in running and jumping over a fence. His pulse and tongue were in a natural state, the belly slow, appetite not yet impaired, and the urine natural in colour and transparency; nor were there any affections in the neighbourhood of the kidneys.

He took, during the first day, some aperient and diuretic medicines, as also some moderate anodyne doses, and went repeatedly into the warm bath. In the evening, the first of these had operated slightly, but without relief to any of the symptoms. The injections which were given to ensure their passage through the bowels were generally received but partially, and with pain, and for the most part instantly and forcibly rejected. He had voided no urine during the day. The pain in the abdomen was increased. Pressure about the region of the pubes more and more intolerable. Much tension observable along the course of the linea alba, and a slight tumefaction below the umbilicus, inclining to the left; pulse full but soft.

He was now blooded, and the catheter introduced. No resistance in the course of the urethra, and perhaps less than natural at the neck of the bladder. Not more than one ounce of urine, of an ordinary appearance, came off; not, however, without sensible relief. He was directed to continue his medicines, and the bath or fomentations as before, unless ease and consequent sleep should render them inexpedient through the night.

5th. The pain recurred soon after leaving him last evening. No discharge of urine during the night. No rest.

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Eight ounces of urine drawn off by the catheter in the morning, and the same quantity at noon. Not more than two ounces came off in the evening. His medicines and other applications through this day the same as yesterday.

Evening. Every symptom aggravated; venesection proposed, but not submitted to.

6th. About day-light, after a distressing night, he suffered twenty ounces of blood to be taken away. About eight ounces of urine came off spontaneously, which, in this solitary instance, rendered unnecessary the use of the catheter. At the joint request of Dr. Noble and myself, Dr. Baron was called to visit him at nine, A. M.

Some relaxation of the tension down the linea alba having taken place, a circumscribed tumour could now be clearly felt, reaching above the umbilicus, and extending considerably on each side, but most perceptible on the left. A large blister was applied between the umbilicus and the pubes, and the saline medicines continued through the day.

7th. Has passed some urine in the night, but is now unable to retain it. No other evident relief. Belly bound. Much distressed with pain in the body of the tumour. Took cathartic medicines, which procured some evacuations, and at night the same combined with anodynes.

8th. Costive. Urine evacuated occasionally, though somewhat sparingly. Great distress in the abdomen generally, apparently caused by accumulation of fæces. Injections came away as injected, and were thought to induce a distressing tenesmus from continued repetition. The tumour on the increase.

A cathartic mixture was given at intervals through the forenoon, to no purpose, and in the afternoon strong doses of pills of jalap and calomel. Evacuations followed sufficient to ward off present danger, and to justify the exhibition of moderate anodyne doses, so urgently called for by frequent fits of pain, and inability to sleep. The tumour undiminished, though somewhat less painful on pressure.

9th. The bowels, though not obstructed through this day, yet slow. The purgative medicines continued, and at night again indulged with a moderate anodyne.

10th. A bad night. Fœcal evacuations still continue, but have become remarkably fetid and bilious, accompanied with other appearances leading to apprehend typhous debility. — Urine passed naturally, though rather scantily.

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The tumour rather increased. Took this day his purgative medicines in a light decoction of bark.

11th. Costive. Injections distress him more than ever. Tumour enlarged. Took, through the day, six doses of strong cathartic pills, and sixteen ounces of a cathartic mixture.

12th. No evacuations. Stomach retains nothing; fæces appear diffused with what was ejected. Tobacco smoke, by injection, was now tried without obvious or immediate benefit. Enormous fœcal vomitings during the forenoon exhibited this formidable case in its most shocking form. The warm bath was ordered.

At this crisis, when the attending physicians were about retiring for further consultation, the patient requested that Dr. L. S. a French gentleman in much estimation, might be called to his assistance. The subsequent management of the case devolved principally upon him. On this account, and as the disease soon after became a chronic affection, daily notices of it were omitted.

The case being now considered as *hernia ventralis*, a correspondent treatment was adopted and carried to the utmost possible extent. He continued in the warm bath several hours at a time. Evacuations were solicited by injections, with the cassia fistularis dissolved in them, and by purgatives least apt to irritate. They came on, bringing relief from the vomitings as well as from the general pain in the abdomen. This plan was continued for two or three days, not without sanguine hopes of success; yet it was discouraging to perceive the tumour still on the increase. A tympanitic affection, which was before observable, in a slight degree, soon became the most urgent symptom, and diffused itself over the whole abdomen, presenting an uniform enormous swelling, tense, elastic, and sounding. The warm bath was then desisted from, and tonic, evacuant and carminative medicines again had recourse to, with the effect of removing, in a great measure, the tympanites. Thus the fine constitution of our patient unexpectedly withstood this second shock; though it was only to show us what farther variety of suffering an originally good frame, unbroken by intemperance, might endure before it finally yields. On the subsiding of the tympanitic swelling the original tumour came again into view, still larger than before. Several attempts were made to effect a radical cure, according with various views which were at different periods taken of the disease. Among these, after a consultation with Dr. Polony, who first discovered evident fluctuation

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in the tumour, (by that time grown so large as to come for a considerable extent in contact with the parietes abdominis) tapping was put in practice. On this occasion about half a gallon of *urine* flowed off freely, when, on a sudden, the discharge stopped, and an inexpressible anxiety and pain were diffused over the whole internal abdomen. These, however, gradually lessened during the two or three succeeding days; but at the same time the tumour was reappearing, and on its having gained its first size, his sensations were in their former state. An elegant preparation of the digitalis, prescribed by Dr. Polony, was tried to no purpose; nature began to flag in her resistance to six or eight weeks of unremitted pain, and the want of due action in an important organ; debility and emaciation increased daily: and the treatment was latterly only with a view to palliation.

He was now attacked with a distinct series of inflammatory symptoms, acute pain in the right lumbar region, inability to lie on that side, feverishness, &c. which continued, without being materially relieved, through the remainder of his illness. While these were yet progressing, he perceived, as he thought, something to burst within him, on the left of the tumour, giving him sensible relief; after which a circumscribed part near the spot was very discernible to be much softer than elsewhere. The last affection, in this case, was an inability to move the limbs of the right side, which had continued two days, when death put a period to his miseries.

DISSECTION.

On laying open the abdomen, the bladder presented itself greatly distended, and reaching half way up between the umbilicus and the scrobiculus cordis. Below the umbilicus a strong adhesion existed between it and the peritonæum, by a circular space of about three inches in diameter. In this, however, no inflammatory discolouration remained. Through this adhesion the trocar had passed; of course he was not disturbed by urine in the abdomen. On the left of the bladder, immediately corresponding with the soft spot discovered on the abdomen before death, a protuberance appeared, which being opened, was found to contain about one ounce of urine, in a chamber, formed between the outer and middle coats of the viscus, and communicating with the main cavity by an orifice capable of admitting a small quill. In the latter were found upwards of three quarts of urine, of a common appearance. After it was completely emptied, and wiped with the sponge, it

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was soon found to be filling afresh, and this repeatedly; the supply coming from the orifice of the right ureter. While dissecting, with a view to the examination of the kidney, the knife passed suddenly into a large sac, lying adjacent to that viscus, on the right side, containing upwards of a quart of urine. Considerable marks of inflammation appeared in the neighbouring parts, and some pus was lodged at the bottom of the cavity. The kidney itself was paler than usual, and more flaccid; its pelvis (then collapsed) not evidently enlarged, but having a communication between its cavity and that of the sac. The bladder was thickened, and of harder texture than common, though it could not be decidedly pronounced to be in a schirrous state; if by this term, so often applied to diseased bladders be meant an affection of the same nature with schirrous glands.

From these appearances after death, and from the order of the symptoms previous to it, it cannot be doubted that the cyst near the kidney must have been formed by a rupture of the inner coats of its pelvis, and consequent distention of its outer coat: This was a necessary consequence of the bladder's having reached its greatest possible distention, and so resisting the further influx of urine secreted in the kidney. We need only suppose the coats of the bladder here, whether from disease or naturally, stronger than those of the pelvis of the kidney, to account for the rupture not first taking place in the former, as most commonly happens.

This cyst, however, being limited in its distension by the neighbouring parts, while yet the secretion of urine was still going on, it is evident that fresh outlets must have been forced by mere mechanical causes: and thus we find another of the same kind formed upon the bladder itself, and which was on the increase when death occurred.

Divested of these adventitious circumstances, the case resolves itself into some original affection of the bladder. But what this may have been, after all the display of dissection, is perhaps yet matter of mere conjecture.

1. Was it originally a paralysis of the muscular fibres of the bladder, and this accompanied with inflammation of the external coat,* causing the adhesion: and again this

* Inflammation of the one coat, and palsy of the other, are not incompatible; for the same strain or overstretching which would injure the tone of a muscular fibre, applied to an adjoining membrane, must lay the foundation of inflammation in it.

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last proving an insurmountable obstacle to any recovery from the paralysis, which the youth of the patient would have entitled him to expect?† It is true, however, that adhesion is not always necessary to such an incurable state of the bladder; as from dissection,‡ similar fatal cases have occurred without adhesion; yet they were in aged subjects, among whom such affections may be expected from the beginning to proceed from bad to worse. If I might hazard an opinion, it would be, that but for the adhesion, a recovery would, in this instance, have taken place. Does Surgery or Physic furnish us with any means of destroying these?

2. In the late stages of these cases, when the patients passed an ordinary quantity of urine, why did not this still continue flowing, seeing the will of the patient coincided? No obstruction existed about the neck of the bladder or in the urethra, and the pressure of the neighbouring viscera, as well as that from much condensed air, must have been considerable.

3. Would the continued use of the catheter be of any avail in such cases? It is regretted that our patient would not submit to the trial of it, which was actually proposed after the perusal of the cases quoted above. Yet it could scarcely have failed to excite fresh distress at the place of adhesion: nor does former observation favour its use but as a palliative. A man in the Pennsylvania Hospital, affected with inability to pass urine from a fall, had it drawn off daily for three months, at the expiration of which time he died. The bladder was found hard, contracted, and thickened.

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† It is certain that the adhesion would prevent the natural and full contraction of the muscular fibres, which, thus kept for a long time over-distended, might lose altogether their disposition to it. Early in the disease, the patient said, that, on attempting to pass urine, he felt as if a wall was placed against his bladder, evidently a sensation arising from the adhesion resisting contraction.

‡ Vide Encyclopædia, Art. *Ischuria vesicalis.*

OBSERVATIONS

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Observations on Scarlatina Cynanchica; by Felix Iascalis, M. D.

We have been visited during the last winter month by the *Scarlatina Anginosa*, or *Cynanchica* (scarlet sore-throat. This epidemic, I suppose, originates, like all others, in certain specific and deleterious principles of the air, or of our aliment. But whenever it is formed, it is either aggravated by acting and re-acting circumstances, or, if it is counteracted by the predisposing habit of the patient, it unexpectedly proves a very mild complaint. Thus we had two distinct species of the scarlatina cynanchica. Neither prevailed universally; and the worst kind seemed to affect children from the cradle to the age of twelve years. Few adults, except those who were foreigners, have fallen victims to this disease.

Epidemics of rare and distant occurrence are very embarrassing in medical practice. Some time elapses before we have collected all written documents, and recollected our own observations; and if there are but few or confused precepts on their treatment, we cannot place an absolute confidence in our best applications.

In many respects our scarlatina anginosa was similar to that which Fothergill investigated in London, during the years 1747 and 1748, and which, a century before, had pervaded almost all the southern countries of Europe. Withering has still better described the symptoms of the scarlatina, as it prevailed at Birmingham in 1778; so that the disease cannot be mistaken for the malignant or putrid sore-throat, *morbus strangulatorius, suffocativus*, &c. We have likewise a very true description of it by Sauvages, as it raged in Montpellier in 1765. The same I have seen frequently in the most southern parts of France.

Whether this disease is always a concomitant of others, such as the small-pox, measles, and cynanche tonsillaris and trachealis, we have not sufficient authority to affirm: thus much, however, may be said, that it appeared with the measles at Birmingham, and in Philadelphia, where the latter epidemic has not yet subsided, since the beginning of the summer.

Our scarlatina cynanchica was preceded by a few days of stupor and unusual weariness, with a slight painful sensation in the throat, and sometimes in the neck and back part of the head. Children who could speak complained of an alternating chilliness and flushing heat, head-ach,

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and sickness. In this stage of the disease, many of the worst cases were marked with delirium, convulsive motions of the muscles of the face, and grinding of the teeth. On the second and third day the soreness of the throat had so much increased that deglutition was very painful; yet the tonsils and salivary glands were little enlarged; but the tongue, velum palati, and fauces, were uncommonly red. Already the face and neck appeared flushed; and, from the breast down to the pubes, a florid redness seemed to be produced by innumerable small pimples and pustules. This eruption sometimes extended to the lower extremities, and over the shoulders and the hips. . . .

Convulsions and delirium in some cases, and great restlessness in others, were observed; and every symptom changed according to the impending issue of the case. If fatal, on the fourth day the scarlet eruption abated, the belly swelled, the skin became rough and dry, and the redness of the cheeks and lips gave place to a livid paleness of the face. The patient experienced an uncommon thirst, without ever swallowing but a few drops; his mouth became parched, and his pulse was small, quick and feeble. The breath was offensive, respiration tremulous and accelerated; and at last, any kind of medicine would induce a colliquative diarrhœa. In a few hours death ensued, marking the surface of the body with a dark brown ecchymosis. But on the fourth day the case might take a far different and more favourable aspect: the scarlet eruption might change into a brownish colour, some moisture be perceived on the skin, and the submaxillary glands become more tumefied. Although the pain of the throat and the difficulty of deglutition were augmented, and the tongue seemed covered with a black or yellow crust, still a favourable discharge of purulent matter was effected from the nose and mouth. Branny scales were discovered on every part of the body, and gangrenous sloughs were discharged from the fauces.

I have not seen, in this stage, the same external effects of mortification, or of hæmorrhage from the ears, &c. as many writers relate; but I believe parts were frequently spotted, and a few gangrenous sloughs detached from them. Notwithstanding, the bowels were regular, and obedient to operations; the urine appeared natural, and the pulse equal, although quick and febrile. In short, in this stage, the scarlatina cynanchica existed no more, except by its effects; the case was merely a typhoid disease, with more or less of those accidents, which were to be referred either

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either to the identity of the attack, or to the age of the patient.

Dissection has, as yet, afforded but little elucidation as to the nature of this disease. Withering mentions one only of Sennertus, who found great ravages in the lungs and the liver. But these, I have reason to believe, cannot be ascribed to the scarlet fever; they must have been the result of some previous complaint. A boy of eleven years old was, on the fourth day, carried off, with the most severe symptoms of the epidemic. Permission of opening the body having been obtained, no alteration was discovered in the lungs nor in the liver. The trachea and the stomach were likewise in a very sound state. The fauces, it is true, the glottis and tonsils, were remarkably livid. But, on the other hand, the large intestines were mostly mortified, and all the glands of the mesentery were considerably enlarged and indurated. In this case also I am prevented from drawing any positive conclusion, for the child was supposed to have been previously labouring under some consumptive disorder.

I have heard many eminent physicians describe two very different degrees of the scarlatina cynanchica. Thus, while natural exertions will be sufficient for the management of a mild case, we may be at a loss to fix upon the best mode of treating gangrenous scarlatina. Medical writers have rather increased our perplexity on this subject, by informing us that certain remedies have either failed or succeeded, when they have neglected to form indications to rule the practice and exhibition of medicines. The prolix treatise of Withering determines nothing but a preference in favour of emetics and diuretics. Can it be conceived, however, that, in an inflammatory and malignant disease, any remedy, such as bleeding, purging, sweating, tonics, acids, opium, blisters and bathing, could all and severally prove abortive, or contrary to necessary indications?

Judging from our experience with Dr. Withering's favourite resource of emetics, we find that they answer very well in the beginning of the disease, to discharge the contents of the stomach, to dispel the impending influx of fluids in the fauces, and to keep up the scarlet eruption on the skin until its desquamation is produced. But this first period of the disease is short; and the more intense it is, the greater is the danger of promoting, even with mild medicines, an inverted operation, when a fatal diarrhœa

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rhœa will soon put an end to the struggle and the life—*quæque miserrima vidi.*

As for his diuretic (fixed vegetable alkali), it afforded relief if given as a *citrate of pot-ash.* It promoted salutary discharges, but its operation did not concur with the principal indications of the treatment; and hence I may show the efficacy of many of the remedies rejected by, or unknown to Dr. Withering.

Three things are striking when the scarlet cynanche has favourably passed the periods of invasion and *maturation.* These are, 1st. The efflorescence or desquamation on the skin; 2dly. The suppuration or discharges of the mouth, nose and ears; 3dly. The gangrenous sloughs from the fauces, or the gangrenous spots, abscesses, vibices, &c. on any part of the body. Of whatever nature the poison or virus of the disease may be, it is surely requisite to aid its dispersion in the most natural manner; viz. the scarlet desquamation should be carefully promoted; the suppuration in the fauces should be accelerated; and the gangrenous tendency in the system should always be counteracted.

In the first instance one or two emetic and diaphoretic remedies will prove highly beneficial; but how much more effectually the second end will be answered by calomel, is evinced by the happy concurrence of many facts. A dose of four or five grains, with an equal quantity of camphor, mixed with some jelly, may be repeated every three or four hours, and seldom continued longer than three or four days, when the purulent discharges from the mouth will be sufficiently promoted, and when bark, wine, opium, and even alcoholic mixtures, will effectually oppose the gangrenous tendency.

If we attend to several circumstances, throughout the different stages of the disease, it will appear obvious that its invasion and action must accumulate such excitement, that bleeding and warm bathing ought sometimes to be resorted to for the relief of convulsive and inflammatory symptoms. But, after the desquamation and discharges of the mouth have taken place, as the disease is transformed into a typhoid affection, in which a direct debility is induced, it will demand the use of all stimulating remedies, among which blisters are particularly successful.

The exhibition of mercury in scarlatina cynanchica, assisted by a medical process, according to the abovementioned intentions, has never been unsuccessful, as far I employed it, in a few cases of the most intense malignancy.

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nancy. Yet much benefit is to be ascribed to calomel, according to the recommendation long ago given to it by Dr. Samuel Bard, of New-York, in his Essay on the sore-throat, or *Morbus Suffocativus*,* and which, perhaps, differed but little from our epidemic. Had I no other authority, I must acknowledge that I should have been sufficiently encouraged by Dr. Rush, in one of those remarkable cases in which the organical powers were so much prostrated and injured that life was despaired of.

P. S. In the Medical Repository, vol. v. p. 39, a case is related of the tape-worm being effectually discharged by using the decoction of Fern.

Is not this plant the *Polypodium Filix Mas* of Linn. Class *Cryptogamia*, called *La Fougere* by the French?

Does not its pulverized root constitute the famous remedy of Mrs. Nouffer of Switzerland, against the tænia or tape-worm?

Did not Lewis XVI. King of France, order the remedy to be bought, and published, as it is, in many books, and especially the Pharmacy of Beaumé?

Was the gentleman who used it unacquainted with this form of the remedy before he prescribed the decoction, or did he not rely upon the method of exhibiting the root itself in powder? If so, I take the liberty to inform him that I was once present at the operation of two drachms of the said powder, which, in twenty minutes, expelled from the body of a Russian Captain as many feet of a tape-worm as to fill up a quart bottle!

Philadelphia, Feb. 8. 1802.

Memoir upon the Muriatic Ether, lately read at the Institute of France. By M. THENARD.†

AFTER having examined why the muriatic either has hitherto remained almost unknown among chemists, although frequently the object of chemical experiments, the author gives the method of obtaining it. For this purpose, as the above ether is habitually in the state of gas, the following apparatus must be employed.

We

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* Vide American Philosophical Transactions, vol. i.

† *Ann. de Chimie*, tom. lxi. p. 290.

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We put in a retort barely capable of containing the mixture, an equal part in volume of highly concentrated muriatic acid and alcohol at 36°; we shake them well, in order to bring all their molecules in contact. This being done, we throw into the retort seven or eight grains of sand, in order to avoid the boiling up, which, without this precaution, might take place in the course of the operation; we then place it in the naked fire upon a common furnace, by means of a grating of iron wire, and adopt Welter's tube to it, which enters into a flask with three necks, double in capacity to the retort employed, and half filled with water at the temperature of 20 or 25°,* so that the tube penetrates a considerable way into the water: afterwards we introduce into the second neck a straight tube of safety; and into the third we introduce a crooked one, which is fixed into an earthen vessel under flasks full of water, at the same degree of heat as the former, and supported by a knob screwed into the middle of it. When the apparatus is thus arranged, the retort must be gradually heated; and in about 20 or 25 minutes we see bubbles arise from the lower part of the liquid, and particularly from the surface of the grains of sand. These bubbles soon increase, and abundance of etherized gas is obtained; acid, alcohol, and water, pass over at the same time, but they remain in the first flask. From 500 grammes of air, and an equal volume of alcohol, we may obtain twenty litres and upwards of etherized gas perfectly pure. But we shall extract much more from it, if, when the extrication of the gas begins to slacken, we add a fresh quantity to the residue, namely, the strongly acid liquor which remains in the retort, and the volume of which is then nearly equivalent to two-fifths of the liquor from which it comes. M. Thenard even thinks, that if, by means of a straight tube going to the bottom of the retort and of a proper length, we could pour from time to time warm alcohol into the latter, the etherized gas would be formed in still greater abundance; for we should conceive that there is every moment more alcohol volatilized than muriatic acid, and that we should thus re-establish between these two bodies the primitive proportions, which are more proper than any other for the success of the operation. In all cases the management of the fire is of the greatest importance: if it be too weak, no etherized gas is produced; if too strong, but very little is produced. Besides, we do not

* The centigrade thermometer is the one intended.

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not etherize the alcohol sensibly by charging it with muriatic acid gas, nor do we obtain ether more sensibly by bringing together the acid and the alcohol in vapours into a tube about the temperature of 80°. It is therefore by preserving a just medium in the application of the fire that we succeed completely. All this proceeds from too small or too great an elasticity in the alcohol, and the muriatic acid prevents their re-action upon each other. One precaution we must also take, is to use the same water for collecting the gas, and to employ the least quantity possible, because it dissolves it in a remarkable degree.

This gas is absolutely colourless; the smell of it is strongly etherized, and the taste sensibly saccharine. It has no kind of action either upon turnsole tincture, syrup of violets, or lime-water. Its specific gravity compared to that of air is 2·219 to + 18° of the centigrade thermometer, and at 0m 75 of pressure at the same temperature, and at the same pressure water dissolves its own volume of it. At this same degree of pressure also, but at + 11° of temperature, the etherized gas becomes liquid. We may procure a great quantity of it in this state, by using an apparatus similar to that we have just described; simply, in place of fixing the last tube under a flask full of water, we must plunge it to the bottom of a long, straight, well-dried probe, and surrounded with ice, which we must renew in proportion as it melts. It is in this probe that the etherized gas alone arrives and is entirely liquefied; for, when once the vessels contain no more air, we may, without the least danger, suppress its communication with the atmosphere.

When thus liquefied, this ether is of a remarkable limpidity, as in the state of gas it is without colour and without action upon turnsole tincture and syrup of violets; as well as the etherized gas, it is very soluble in alcohol, from which we may, in a great measure, separate it by water: like this gas, it has also a very decided smell, and a very distinct taste, which has something analogous to that of sugar, and which is particularly remarkable in water which is saturated with it, which may, perhaps, be employed successfully in medicine. When poured upon the hand, it suddenly evaporates, and produces a considerable cold, leaving a small whitish residue. At + 5° of temperature, (centigrade thermometer,) it weighs 874, water weighing 1000. Thus, although it is far more volatile than the sulphuric ether, and, *a fortiori*, than alcohol, not only is it thicker than the former, but even than the latter of these two bodies. Lastly, it does not congeal at a temperature of — 29° (centigrade thermometer.)

Hitherto

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Hitherto we have seen nothing in this ether which does not perfectly agree with that presented by other matters; it is nothing else than a substance curious from its novelty, and particularly from the facility with which it is gasified and liquefied. When we reflect upon it a little more, it appears one of the most singular and extraordinary compounds we can produce. It does not in the least redden turnsole tincture; the strongest alkalis have no action upon it; the solution of silver does not meddle with it at all; and all this, whether we employ it in the gaseous or liquid state, or dissolved in water: if we set fire to it, there is suddenly developed such a quantity of muriatic acid, that this acid precipitates in a mass the concentrated nitrate of silver, suffocates those who respire it, and even appears in the form of vapours in the surrounding air.

Is the muriatic acid formed in this inflammation, as we are induced to think, or is it only set at liberty? This is the question which the author of the memoir afterwards endeavours to resolve.

If the muriatic acid be formed in the combustion of the etherized gas, the radical of this acid must exist in the gas; and this radical necessarily comes from the alcohol, or from the muriatic acid decomposed by the alcohol, or, what is not very probable, although not impossible, from both. In the first case, by distilling a mixture of alcohol and muriatic acid, we ought to find after the distillation all the muriatic acid employed, besides that which appeared in the combustion of the gas formed; in the second case, on the contrary, a great quantity of acid ought to disappear in this distillation; but by keeping an account of that which is developed in the combustion of the gas formed, this quantity of acid precisely, and no more, ought to re-appear entirely. In the third case, from this distillation, a loss of acid should also result; but this loss should be more than compensated by the quantity of acid which the combustion of the gas formed ought to produce. Now, on performing this distillation upon 450·937 grammes of muriatic acid of a specific gravity of 11·349, at 5° temperature (centigrade thermometer,) and upon a volume of highly rectified alcohol equal to that of the acid, there are formed 23 litres of etherized gas at the temperature of 21° of the centigrade thermometer, and at the pressure of 0^m 745, and there disappear 122·288 grammes of acid.

The first hypothesis is consequently false, since it is demonstrated that, even should the radical of the muriatic acid exist in the etherised gas, this radical would proceed not

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not merely from the alcohol, but rather either from the muriatic acid alone, or from the muriatic acid and alcohol.

Let us inquire if it proceeds from the muriatic acid alone, as supposed in the second hypothesis: but here there are two ways of considering the phænomenon: either the muriatic acid must have been decomposed by the alcohol, so that its radical, without its other principle, is to be found in the etherized gas; or this decomposition will have been such, that all the principles of the muriatic acid will be found in the etherized gas, not united, and not forming muriatic acid, but combined with the principles of the alcohol, and in the same state in which hydrogen, oxygen, carbon, and azot exist in animal or vegetable matters. Now if the radical of the muriatic acid exists alone in the other principle, or without a portion of the other principle of the muriatic acid in the etherized gas, we ought, by decomposing this gas in a red-hot tube, and deprived of the contact of the air, to obtain no acid at all, or else less of it than has disappeared in the experiment which produced it: and if this gas contains not only the radical of the muriatic acid, but also all the constituent principles of that acid; as those principles, whatever they are, have a strong tendency to combine, we should conceive that by destroying the etherized gas by fire, without the contact of the air, we shall probably obtain the whole quantity of muriatic acid which has disappeared in the experiment by which we procured it. It was therefore of the greatest importance to produce this decomposition in close vessels. The operation was performed on 900 grammes of concentrated muriatic acid, and upon an equal volume of well-rectified alcohol. Between the red-hot glass tube, in which the gas was decomposed, and the retort in which it was produced, there was a large tubulated flask containing water at about 15° or 16°, in order to catch the acid, the alcohol and the water, which might be volatilized along with this gas; the glass tube, besides, communicated with two other flasks, one containing potash and the other water, in order to absorb all the acid which might reappear in the operation: finally, the gases were collected by means of another tube. To ensure the success of the operation, the glass tube should be well luted, and the fire also well managed to prevent the tube from melting. Although in this experiment there ought to have been produced nearly 50 litres of etherized gas, and nearly 250 grammes of acid ought to have disappeared in the first place, yet all the acid except four grammes re-appeared in the red-hot tube, and came to be dissolved in the two flasks of the apparatus.

Thus,

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Thus, of all the suppositions hitherto formed of the muriatic acid being a compound body, one only is admissible, which infers that the elements of the muriatic acid exist in the etherized gas combined with the elements of the alcohol, in the same manner as the elements of water, carbonic acid, ammonia, &c. exist in vegetable and animal substances.

Now if we suppose the muriatic acid to be a simple body, we must then necessarily regard etherized gas as formed of muriatic acid and alcohol, or of a body coming from the decomposition of alcohol; for alcohol is perhaps decomposed when we distil it with the muriatic acid. In all cases, the question is thus brought to a choice of the two hypotheses. Let us now try their merits as well as we can.

One, namely that which we have last mentioned, presents us with phænomena of difficult explanation. In fact, it must be supposed that alcohol, or the body which represents it, acts upon the muriatic acid with much more energy than the strongest alkali, since this alkali cannot take it off from it, and since, as will be subsequently demonstrated, the muriate of potash contains less acid than the etherized gas; and how can we conceive, on the other hand, that the nitrate of silver, which takes up all the muriatic acid from the muriate of potash, cannot take it up from the etherized gas, which contains more than the muriate of potash does?

In the other hypothesis, on the contrary, every thing is naturally explained. We see the reason why the etherized gas does not redden turnsole tincture, and the alkalis do not alter it; why the nitrate of silver produces no precipitate from it; and why, on taking fire, so large a quantity of muriatic acid is produced, that it appears in the air in the form of vapours:—in short, we can reconcile every thing with the phænomena of other bodies.

M. Thenard, however, is far from admitting the one and rejecting the other in a decided manner. Both deserve to be investigated; and whatever happens, the results must be very important.

Note upon the Discovery of the Muriatic Ether.

By M. Thenard.*

When I read the foregoing memoir to the Institute, the whole of the members, among whom were Messrs. Berthollet,

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* *Ann. de Chimie*, tom. lxi. p. 303.

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thollet, Chaptal, Devoux, Fourcroy, Guyton, Vauquelin' Gay-Lussac, &c. regarded the results it contained as being extremely novel, and were struck with the consequences which might be drawn from it. M. Proust, who was then in Paris, and before whom I repeated the experiment of testing the etherized gas by the tincture of turnsole and the nitrate of silver, before aud after the combustion of the gas, &c. evinced the same surprise with the French chemists. A few days afterwards, however, M. Gay-Lussac, on perusing the German Journal of Gehlen, accidentally discovered in a note that Gehlen himself had made experiments upon the muriatic ether, and published them in his Journal for 1804. M. Gay-Lussac did me the favour to translate M. Gehlen's memoir; and as it has a great similarity to mine, I shall give the following extract.

M. Gehlen made muriatic ether with the smoking muriate of tin and alcohol, by employing an equal part in weight of both. He also made it in Basse's method, (a chemist of Hameln) by a mixture of sea-salt, concentrated sulphuric acid and alcohol, from which it was never thought that any thing else than sulphuric ether could be extracted. He obtained none with the muriatic acid alone. In short, M. Gehlen recognised most of the properties which I did in the muriatic ether. Thus he saw that this ether is most frequently in the state of gas, that it liquefies at about + 10° of Reaumur, that it is slightly soluble in water, that it has a saccharine taste, that it does not redden turnsole tincture, that it does not precipitate the nitrate of silver, and that when we burn it, a great quantity of muriatic acid is developed. M. Gehlen made no experiment, however, to prove from whence this muriatic acid came, or to ascertain the quantity produced by the etherized gas; neither did he attempt to establish the theory of this etherification. It is in this respect only that my labours differ from his. We differ a little also, but not remarkably, as to the process I employed for making the muriatic ether, and by means of which I obtained in an instant probably more ether than by any other, and an ether purer also than M. Gehlen's, since his weighed 845 only, and mine 874, a greater specific gravity in the present instance being a proof of greater purity.

Having no doubt, from the above, that the muriatic ether had been made in Germany, and that its property of producing muriatic acid when burning was also known; and convinced as I was on the other hand, that in France and Spain the fact was unknown, I endeavoured to ascertain if the English chemists knew any thing of the matter. For

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this purpose, I applied to M. Riffault, the superintendant of the gunpowder manufactories, and who was at that moment translating the third edition of Thomson's System of Chemistry, a work full of erudition, and begun long after M. Gehlen's memoir appeared. M. Riffault read to me every thing respecting the muriatic ether, but I found nothing about Gehlen, or the singular properties he relates of the muriatic ether. Mr. Thomson only speaks of the process of Basse, which consists in mixing melted sea-salt, alcohol, and sulphuric acid; and which, with the exception of the fusion of the salt, has been pointed out by several chemists. I think myself therefore entitled to conclude, that in Great Britain, as well as in France and Spain, the muriatic ether was unknown, and that, being ignorant of M. Gehlen's labours, I have at least the merit of publishing it. How often does it happen that a discovery is made in one country, which had been known in another long before! and this happens because all learned men do not speak one language, and their works are not always translated. This is the case with M. Gehlen's discovery.*

To HARLESTONENSIS.

SIR,

IT is generally acknowledged, I believe, that there are offences, without the pale of the law, of greater magnitude, than many which are severely punishable by our criminal code. To personate another for the purpose of any pecuniary advantage, is made felony without benefit of clergy; but to assume the name of a respectable man, with the design of vilifying or degrading him, may be done with impunity; though the crime against society in the latter instance, is as much more serious than the former, as the value of character is to be estimated beyond the price of wealth. This preamble leads to a charge of a late attempt in the Med. Journal, to 'laugh to scorn' a very worthy gentleman;

* Since writing the above, M. Boullay, a respectable apothecary in Paris, informed me that he made the ether in question with the muriatic acid and alcohol long ago, although he never gave publicity to his experiments, because he did not think they were so complete as they ought to have been. I am proud to have an opportunity of doing justice to M. Boullay.

Note by M. THENARD.

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gentleman; and if, as some suspect, you are not the identical personage W. G. M D. intended to represent Dr. Girdlestone of Yarmouth, I shall hope for your assistance to strip off the lion's skin, and expose to the just indignation of the public, the degraded author of so vile an artifice; indeed, if you are not concerned in this fabrication, it will be incumbent upon you to aid the discovery by every possible elucidation; for at some future time, Harlestonensis may, in propria persona, become the butt of the slanderer, when we find, as in this case, how easily it is effected, that no talents are requisite but those for defamation.

Your *first* letter contains so little worthy of observation, and is so free from all offensive language, that our astonishment is excited at the angry and supercilious reply of Dr. G.—*This supposed answer,* produces your *second* letter, which could only be justified by a firm persuasion in your own mind that it was really written by that physician.

Now, Sir, I would ask, did you not know before the second letter was printed, that W. G. M. D. was a fictitious person?

Were you not informed *(in time to have suppressed this unprovoked attack upon Dr. G.)* that he, (Dr. G.) was not your correspondent?

If you do not give a plain and satisfactory answer to these queries, your credit must suffer in the judgment of every honest man.

VERITAS.

July 10, 1808.

Observations upon Sulphurous Mineral Waters. By M. Westrumb.*

M. WESTRUMB has been employed in making researches upon several kinds of sulphurous waters, and latterly upon those of Eilsen in the county of Scaumbourg.

One of the most interesting facts he has discovered is, that all sulphurous waters contain a greater or less quantity of hydro-sulphuret of lime.

In order to ascertain it, he boiled the mineral water ex-

 cluded

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* From M. Gehlen's Journal of Chemistry, vol. v.

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cluded from the contact of the air, in order to expel from it the sulphuretted hydrogen gas and the carbonic acid.

He afterwards poured into the residue—

1st, Sulphuric acid, which liberated sulphuretted hydrogen gas from it; and sulphat of lime was precipitated.

2d, Smoking nitric acid, which separated sulphur from it.

3d, Oxalic acid, which liberated sulphuretted hydrogen gas from it; and oxalate of lime was formed.

4th, The water evaporated with the contact of the air, precipitated sulphat of lime; and the sulphuretted hydrogen gas was liberated.

In order to determine rigorously the quantity of the sulphuretted hydrogen gas and of the carbonic acid, M. Westrumb proceeds in the following manner:—He introduces sulphurous water into a matrass to a certain point, putting a mark upon the level of the liquid; he adapts a curved tube to it, entering into a long cylinder, which is at one time filled with lime-water, and another time with acetate of lead, with excess of acetic acid.

The apparatus being thus arranged and well luted, he boils the water, and continues the ebullition until there is no more gas liberated.

In the first experiment it is the carbonat of lime which is precipitated, 20 grains of which correspond to ten cubic inches of carbonic acid; and in the second case it is oxidated hydro-sulphuret of lead, 19 grains of which indicate ten cubic inches of sulphuretted hydrogen gas.

Another observation equally remarkable concerns the sulphuretted hydrogen gas.

M. Gimbernat, a Spanish chemist, has asserted, that the hot springs of Aix la Chapelle contains sulphuretted azotic gas.—M. Schaub attempted to extract it from the sulphurous waters of Nenndorf in Hesse. The following characters have been attributed to this gas:—1st, A smell similar to the sulphuretted hydrogen gas; 2d, Being indecomposable by the carbonic acid gas; 3d, Not being inflammable; 4th, Being improper for supporting an inflamed body; 5th, Being indecomposable by the nitrous gas; 6th, Being decomposed by the concentrated nitric acid, which separates sulphur from it; 7th, Decomposing the metallic solutions, and forming sulphurets; 8th, Having a great affinity for water, from which it cannot be separated, except by long ebullition.

But M. Westrumb has found that when we wash sulphuretted hydrogen gas with lime-water, or when we pass a current

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a current of this gas through slaked lime, it acquires all the above properties.

Whether the sulphuretted hydrogen gas be obtained from sulphurous waters, or be prepared in any other way in use, the same phænomena take place.

On bringing back the lime-water by an acid, sulphuretted hydrogen gas is liberated, which is inflammable, and which possesses its ordinary properties.

Sulphuretted azotic gas is therefore a product of the operation.

M. Westrumb does not yet know if this new gas be produced by the action of quick-lime upon sulphuretted hydrogen gas, or if this substance does not contain sulphuretted azote.

Lastly, a third observation not less interesting is the presence of carbon and carbonated substances in the sulphurous mineral waters.

M. Westrumb has discovered a new principle in them—*a fætid resin of sulphur.* (Stinkendes schwefelharz.)

In order to obtain it, we must evaporate the sulphurous water excluded from the contact of the air, and afterwards take up the residue by alcohol, which dissolves this resin more than the earthy muriates. By the evaporation of the alcoholic liquid, the substance at first looks like a yellowish fat, it is successively coloured brown, and becomes resinous.

By repeated solutions in alcohol, and by evaporations, it is decomposed into sulphur, and into a resin of a blackish-brown.

It has a garlic smell, which becomes very strong, and similar to assafœtida, when we pour water into the alcoholic solution.

Its solution acts like an acid.

Its resin is dissolved in ammonia, and communicates a yellow colour to it; the liquor acts like that of Beguin. With lime-water we obtain a hydro-sulphuret. All these solutions act upon the metallic combinations like sulphuretted hydrogen.

As sulphurous mineral waters have their origin in beds of pit-coal, we might perhaps find the source of this bituminous principle in pit-coal itself.

Around the baths of Eilsen, like those of St Amand, there is accumulated a kind of crust, which gradually becomes of a dark colour, and latterly black.

By analysis, there have been extracted from it sulphuretted fetid resin, hydro-sulphuret of lime, sulphur, lime,

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alumine, magnesia, charcoal, and sand, with some fibrous substances, a little sulphuretted hydrogen gas, and carbonic acid gas.

Whatever be the origin of the bituminous principle in sulphurous waters, M. Westrumb succeeded in producing charcoal and fetid resin, by employing sulphur perfectly pure.

For this purpose he digested sulphur precipitated by an acid in alcohol. By distilling the alcoholic liquor, there is separated yellow crystalline sulphur, or a yellowish grey powder: the fetid resin is then completely formed in the liquor floating above, and possessing all the above properties

We might attribute its formation to the presence of the alcohol, and *à fortiori*, because, after its separation from the residue of the evaporated sulphurous water, the penetrating smell is manifested, when it is taken up by the alcohol. But several observations lead M. Westrumb to think that the alcohol does not contribute to the formation, and that it rather derives its origin from the sulphur itself.

Letter of M. Roloff, *of Magdebourg, upon the foregoing Subject.**

I have recently recognised, in an unexpected manner, the sulphuretted fetid resin of M. Westrumb.

M. Michaelis, after having precipitated the golden sulphat of the hydrogenated sulphuret of antimoniated potash, evaporated the liquor floating above containing the sulphat of potash.

When the ley began to concentrate, a vapour was developed, which very much embarrassed the artist who was stirring the mass. There was at the same time manifested an insupportable smell, analagous to that of burnt assafœtida.

The saline mass evaporated to dryness had a grey colour, and the remarkable smell we have mentioned.

It was was put in digestion with alcohol, which acquired the taste and smell of garlic.

The alcoholic liquor evaporated spontaneously, yielded a grey gluey mass, possessing the same smell and taste.

I am desirous that this experiment should be made public, not knowing if M. Westrumb is acquainted with the formation

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* From Gehlen's new Journal of Chemistry.

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formation of a large quantity of fetid resin which may be easily procured by this process.

As the smell is manifested before putting in the alcohol, we may conclude, with M. Westrumb, that the alcohol does not contribute to its formation.

New Edition of the London Pharmacopœia.

THE Committee appointed for the revision of the Pharmacopœia have submitted a specimen to the Fellows, Candidates, and Licentiates of the College, and solicited upon an object of such general concern and importance, the opinions and suggestions of each individual to whom the specimen is addressed.

In the progression, they observe, of human knowledge, pharmacy cannot remain stationary, and the College have accordingly accommodated it to existing circumstances, at suitable intervals, and thereby regulated and improved the practice of medicine in this country. Such a revision they have felt themselves called upon to make, at the present time, by the vast improvement in the several branches of science, with which pharmacy is more especially connected, since the year 1787, and they think it proper to state generally the principles upon which various alterations have been adopted in the present instance.

These alterations are referable to the several heads of nomenclature, weights, and measures, arrangements, processes, the omission of former articles, and the introduction of new ones.

To each of these it will apply as a general observation, that practical application and convenience have been assumed as fundamental points, which the Committee have endeavoured constantly to keep in view.

1. *Nomenclature.* At the time of the publication of the last Pharmacopœia, modern chemistry was in its infancy; its language, (which professed to describe, and not merely to designate a substance by its name), was new in principle, and the application of it not generally received. Various terms, therefore, of that Pharmacopœia differ essentially from those which have since been established in the Science, and it has been incumbent upon the Committee to consider in the present instance, whether the nomencla-

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ture of chemistry might be still farther and more minutely adopted. As far as arbirtary names (to which common consent has affixed precise ideas) go, and also in compounds consisting of two ingredients only, or where different proportions of the same constituent parts are to be expressed, it has been thought proper to receive those terms which general chemistry employs; but as a large proportion of pharmaceutical preparations consist, strictly speaking, of more complex combinations, which cannot be expressed correctly without periphrasis and inconvenience, and are therefore but ill suited to the purposes of prescription, the Committee have judged it sufficient to designate these, without attempting at the same time to describe their composition; and whether the name has been drawn from some circumstance of preparation, or quality, they have cautiously endeavoured to make such distinctions as may be least liable to error in the ordinary method of practice, and may not contradict the received chemical doctrines, or mislead in their application.

The names of vegetables have also been accommodated to the latest systems of Botany, so that they may not hereafter contradict the terms of that science, or deceive the practitioner in his references thereto. Many names of medicinal plants were in the earlier periods of Botany drawn from those of families to which modern system does not admit them to belong,* but have been retained in pharmacy, though wholly at variance with the improved state of science. The committee trust they have been able to remedy this inconvenience without very frequent violence to the names commonly employed. They have thought it most convenient, and fully sufficient, to experess each article in general by a single word,† and have retained the former one wherever it accorded either with the generic or specific name of Linnæus, both of which, however, it has been necessary to employ, for the purpose of distinguishing between them, when more than one species is taken from the same genus.‡ There being some vegetable substances, the names of which are in a manner independent of botanical nomenclature,§ no alteration with respect to these seemed necessary, for in fact they are not at variance with modern science. Intending, moreover, that the pharmaceutic name shall, where a part of a plant is

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* Cicuta. Helleborus albus.
† Aconitum. Cascarilla
‡ Rosa Gallica. Rosa canina.
§ Arabicum Gummi.

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is used, refer to that part only, they have transferred the term expressive of such part from the first column of the catalogue, in which it formerly stood, to the second.

2. *Weights and Measures.* From the great uncertainty of the customary mode of dividing by drops any quantities of liquids of less bulk than a drachm, and the increase of that uncertainty by the late introduction into some shops of measures applying to liquids of different densities, the bulk of a drop of water as a standard, the Committee have been led to consider the subject more particularly, and to adopt means for the removal of this uncertainty in the exhibition of many active remedies for the future. They have, for this purpose, adopted the gradulated measure of the late Mr. Lane, which is founded upon an accurate division of the exchequer wine gallon down to the $\frac{1}{60}$ part of a drachm, and which is equivalent to a drop of water. Of course it is their intention, that the common method of dropping liquids of different densities should be disused, and the measure received into the shops of apothecaries, a point upon which it will be necessary to place especial stress, in order that prescriptions may be accurately prepared. As the same Latin term has been employed to express the pint measure and the pound weight, they have extended the same resemblance to inferior measures, and have the more readily substituted *granum* for *gutta*, because the latter term implies that peculiar mode of division which they wish to deprecate.

3. *Arrangement.* On this head, it is only necessary to observe, that the chapters have been arranged in what appeared to be a more natural and convenient order of the substances concerned than the former one.

4. *Processes.* Considerable alteration has been made in various processes, by which the Committee hope they will be found more accommodated to general use. Expence in preparation ought not to be balanced against correctness and uniformity, and it is to be lamented that the profits and competition of trade should have induced a very extensive disposition to deviate from the directions of the Pharmacopœia. To this point, therefore, the Committee have looked with much attention, and, as far as they have thought themselves justified, they have endeavoured to make such deviation less an object to the operating Chemist than heretofore; for this purpose they have not looked in their formulæ to that accuracy which would be necessary for chemical tests, but rather to the uniformity of the preparation, and its use as a medicine. The directions for manipulation

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manipulation are given *generally*, because they admit of some variety in their application in many instances, according to the scale on which they are prepared, and other circumstances; the Committee trust, however, that, if their directions be followed, the results will be, in the same proportion, uniform and correct, and that the well educated Apothecary will have no difficulty in understanding and applying them. Under this head, it is particularly incumbent upon the Committee to acknowledge the great advantage they have derivrd from the liberal communications of the Society of Apothecaries, with respect to the practice of their extensive concern, and also from many individuals engaged in chemical preparations upon a large scale.

5. Omission of former Articles and Introduction of new ones. In the rejection of many substances of trifling importance or efficacy, of others which have appeared rather to belong to extemporaneous prescription, and of certain forms of medicine which have become obsolete in general practice, and also in the introduction of any new articles, the Committee have exercised their own judgment freely, but they trust with sufficient caution. They hope the College at large will approve of their having neglected to insert many substances which individual practitioners have recommended and employed, where such have not received the sanction of more general experience. They conceive further, that a strict examination of its powers ought to precede the introduction of any article into the Pharmacopœia, and that the late appointment of a Committee of the College for this express purpose will hereafter appreciate the value of such recommendations, by surer tests than those which have heretofore been deemed sufficient.

It is scarcely necessary they say to state, that the present Specimen merely submits to the College the result of the deliberations of a Committee, and that neither their attention or knowledge can be supposed to have comprised therein all the circumstances which deserve consideration; the Committee, therefore, await those corrections which the experience and observation of the profession at large may communicate, and which it will be their duty to consider, and estimate attentively, as they proceed; and they trust that, in its final arrangement, the new Pharmacopœia will contribute to the honor of the College, and an improved practical application of the Science of Medicine.

The Committee request that the copy of the Specimen sent to every Member of the College may be returned, with any remarks thereon, under cover, to the *Register of the*

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the Royal College of Physicians, Warwick-lane, London, on or before the 25th of July next.

The following specimen of the new names will give our readers an idea of the Nomenclature intended to be adopted. Ammonia carbonica, liquor ammoniæ, potassa carbonica, soda carbonica, potassa sulphurica, soda phosphorica, potassa sulphurata, arsenicalis liquor, (Fowler's solution) ferrum muriatico-ammoniatum, ferrum sulphuricum, &c.

On some occasions the Committee have designated the same substance by different names, e. g. corrosive sublimate is called hydrargyrus corrodens muriaticus, and hydrargyrus oxi-muriaticus, rhubarb both rhabarbarum and rheum, calomel is called hydrargyrus mitis muriaticus. Many of the old names are retained, as pulvis antimonialis, vinum ferri, cerussa acetata, decoctum cinchonæ. Amongst the new infusions we find those of cloves, cascarilla, colombo, quassia, rhubarb, simaroubа, tobacco, catechu, digitalis, and tar.

Among the new extracts occur those of the hop, taraxicum, aconite, belladonna, and rhubarb.

The musk mixture is retained, and the saffron is proposed to be still kept in the compound tincture of aloes, and the tinctures of rheum, capsicum, digitalis, and hops are proposed; and we would recommend a tincture of conium as the extract does not keep well. We conclude that the syrup of saffron is retained on account of its colour; and probably the same motive has induced the Committee to retain it in the aromatic confection and compound tincture of bark, though it has long been known to possess no medicinal virtues.

As opium is the most important article in the Materia Medica, and as many patients entertain an insuperable prejudice against it, we should have rejoiced to have seen both liquid and dry preparations of it, in which the *name* is suppressed, as it is in the pulv. ipec. comp. and in the tinctura camp. comp. We have no doubt that an elegant and useful tincture or solution of opium, in imitation of the well-known black drop, would be a valuable addition to the new Pharmacopœia.

Directions

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Directions for constructing a cheap Bed and elastic Frame, for the easy Conveyance of sick or wounded Persons. Invented, and most humbly presented to his Royal Highness the Commander in Chief, by PATRICK CRICHTON, *Lieutenant-Colonel of the Second Regiment Royal Edinburgh Volunteers.*

Construction of the Elastic Frame.

THE lower frame is made of ash or elm, seven feet long, and five feet four inches broad.

There are two strong wooden pillars, bound on the sides by two circular pieces of iron, for supporting the elastic frame.

The elastic frame is made of the best ash, supported by the wooden pillars, and semicircular pieces of iron.

The frame or cott, contains a mattrass or pelisse, stuffed with straw.—Two or three hammocks may be suspended, and will answer as well as the cott.

The cott, bed, and mattrass are supported by rings and iron hooks.

Four handles project from the under frame, one foot three inches long each, by which the whole may be carried by four men.

Four semicircular hoops may be placed over the frame, over which a cover can be thrown, to protect the patient from the weather.

The under frame and pillars should be made of ash or elm, well seasoned.

The elastic, or upper frame, should be made of ash, remarkably clean and well seasoned, thick in the middle where it is supported, and tapering towards the ends.

The total expense of the whole, including the iron-work, should not exceed four pounds ten shillings.

Directions for using the Bed and Frame.

The lower frame may be fastened by ropes to any cart or waggon, of the same size, or larger than itself.

The sick or wounded person should first be placed in the bed.

The frame should then be placed over the bed, and the ropes at the head of the bed suspended upon the iron hooks.

Then the ropes at the feet should be hooked up.

The frame, containing one or two sick men, can be easily lifted by the four handles by four men, and carried to any distance to a cart or baggage-waggon.

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The lower frame is then fixed to the cart by ropes, and the machine is ready to move.

When the sick are taken from the baggage-cart, the whole frame should be lifted at once, and carried to the hospital.

The bed should then be unhooked, first at the feet and then at the head, and the frame taken away.

Upon large English waggons, two or three of these frames may be conveniently placed.

If the carts of any district are too small for the breadth of the frame, it may be made narrower, so as to adapt it to that conveyance.

When the machine, was first invented, it was solely intended for the use of the army.

To this purpose it has been successfully applied; and is in common application in several of the garrisons of Great Britain, as affording the easiest means of transporting sick or wounded soldiers, from garrison or quarters, to the hospital.

Since the time of its being adopted by the army, it has likewise been brought into the service of a great many of the public hospitals, not only for the purpose of conveying maimed or bedridden patients from their houses to the wards, but for removing such patients, as were under the necessity of undergoing operations, from the wards to the operation room, and returning them again from the operation room to the wards, without subjecting them to the necessity of being dressed, or even removed from the beds.

Having successfully answered these purposes, it has of late been used, when fixed upon a cart, waggon, or upon the carriage of a postchaise, for removing wounded persons, or such as were afflicted with disease, and who were unable to support the motion of a chaise or coach, from different parts of the country to towns where they might enjoy the benefit of medical advice.

In this manner, the use of it, in Scotland, has become of late very general, and, fortunately, very beneficial to those who have travelled in it; all of them concurring, that they were insensible of any unpleasant motion during their respective journeys.

To enumerate the instances of its successful application in this manner would fill a small volume; but a few facts will enable the public to appreciate its value.

A person was brought in it, with a compound fracture in the

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the thigh bone, from the west Highlands to Edinburgh, a distance of 74 miles, in two days.

A gentleman, with an attack of gout both in his hands and feet, was removed from Edinburgh to the north of England, above 140 miles, in three days.

In both these instances, and a great many more, the bed and frame were suspended to the carriage of a postchaise, and, with a servant sitting in front, travelled post.

Some hundreds of examples can be adduced of the removal of patients by its means, when fixed on a cart or waggon, and in many of these the patients were in a state of the most severe bodily distress and debility.

In all these removals, the patients have borne testimony to their enduring no additional pain or inconvenience from the motion of the machine; all of them, even in the most severe cases, declaring, that they were alike insensible of bodily fatigue, or of the least increase of pain, from the mode of conveyance.

The royal colleges of physicians and surgeons of this place have bestowed upon it the most unlimited approbation, both by letters addressed to the inventor, and in the publications of several of their members.

In consequence of these proofs of its successful effects, and these encomiums from the learned and respectable bodies who are so well enabled to decide regarding its merits, a number of applications have of late been addressed to the inventor, soliciting him to describe and delineate the machine, so as it might be introduced into general use in the various quarters of the kingdom.

To save time in complying with these requests, he adopted the method of printing and circulating a plate, accompanied with a description, which will clearly demonstrate, at how very small an expence, and with how very little mechanical art, the elastic frame can be constructed; for, in fact, there is no village in Britain, in which an ordinary smith and carpenter reside, where it may not be easily made.

Under these circumstances, the inventor feels it a duty he owes to his country, and to those suffering bodily distress, to give it all the publicity in his power; with which view, and with the most ardent wishes for its continuing to prove beneficial, in mitigating the distresses of such as may require its aid, this account is submitted to the public.

Gayfield Place, 17th Sept. 1807.

To

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Observed in one of your Journals some observations upon the exhibition of Mercury in Typhus Fever, by an author who calls himself Harlestonensis. The glaring inconsistencies of which his letter is composed, that arrested my attention, I cannot pass over without briefly observing upon. The manifestations of this gentleman's too good opinion of himself, must arise from a principle incompatible with that which would have influenced him to a more just and liberal one of others. He begins, by accusing medical men in general, of advancing absurd and preposterous opinions, only because they are new and singular; and he tells us, "that we are not to set those things down for facts to be depended upon in the application of medicine, which are supported only by a case or two of uncertain benefit." It appears very extraordinary, that in this liberal survey of what he conceives to be the erroneous part of his medical brethren, he should overlook a character so conspicuous as himself; that he should commit himself in the very same error, even when he was censuring it in them, for in the following paragraph he takes upon himself to decide for us upon the important question of the propriety of mercury in typhus from a single case of uncertainty! When we see contradiction opposed to experience, by one whose professional situation must necessarily render his pretensions to medical acquirement too questionable to be admitted without investigation, we cannot feel ourselves under the influence of those unsatisfactory assertions, which, on this occasion, it was but reasonable to expect he would have given validity to by some practical observations on the general effects of mercury in typhus; but, on the contrary, the symptoms of the single case, recorded for our satisfaction, are not accounted for, nor has he informed us what in that case he attributes to the mercury! Indeed, I have been puzzled to discover this gentleman's object in writing, for were we inclined to establish our opinions from the circumstances of a single case, this is an ill chosen one to impress us with objections to the practice, as there appears nothing at all satisfactory for or against it.—Then what have we to influence us to lay it aside, or to entertain a worse opinion of it? We are simply told it is detrimental! He must be aware that naked assertion, unaccompanied

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companied by argument, will not avail in the world of science any more than contradiction without proof; he surely did not think of assuming to himself a consequence sufficient to abolish a plan of medicine, suggested by the highest medical authority, adopted from sound and rational theory, and established by the result of experience. Every practitioner knows that typhus may prevail in one place in a very considerable degree, and that, under almost any plan of medicine, they may generally do well. At the same time, in another part, at the distance of only a few miles, it prevails apparently under similar circumstances, (but probably under the influence of causes not understood, that varies its nature and degree, and governs its precarious termination) and upon whatever plan of medicine, however well directed, a considerable number of these may die.

On one occasion, a medicine might receive unmerited applause, and on the other, perhaps, an unworthy condemnation. How difficult then to judge from a single case. I mean by this only to intimate, that the benefits of experience are no where more essentially necessary than in the formation of a correct judgment of the importance of any medicines in typhus fever, more especially to decide upon their claims to superiority. But, under the disadvantages of a short experience, and a very confined practice, the inferences of Harlestonensis must be premature, and his decisions subject to error. In another part of this author's letter, he compares mercury in typhus to a long catalogue of disreputable medicines, which he begins with digitalis; this invaluable medicine I can tell him, was never in more general use than in the present day. I would ask if his practice have furnished him with a number of those cases in which it is particularly recommended, and whether he has employed it invariably without success? for if it has succeeded in only one of those cases, that before the introduction of this medicine, were left without a remedy, and that generally ended only in death, it would be ungrateful indeed in his unwarrantable displeasure, to snatch it from its exalted place in medical estimation, and hurl it down to swell the contemptible list of obsoletes. My principal object here, is to recommend to this gentleman, instead of Harlestonensis, hereafter to take the name of Taylor, that his future productions may not be attributed to those who do not wish to rob him of their merits.

S. STROWGER.

Harleston, July, 1808.

To

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ACCOUNT *of a* CASE *of* FISTULA LACHRYMALIS; *with Reflections on the different Modes of operating in that Disease. By Dr.* CHATARD, *of Baltimore, in America. In a Letter to Dr.* MILLER.

HAVING performed the operation for *Fistula Lachrymalis* about eighteen months ago, I now send you some observations on the subject, which you are at liberty to publish if you find them worthy of consideration.

Nancy ——, of this city, fifteen years of age, for about a year and nine months had been labouring under a *Fistula Lachrymalis* of the worst kind. When first consulted on her case, I found the eye inflamed; the eye-lids red and thickened; a purulent discharge proceeding from an opening situated on the edge of the orbit, about four or five lines below the straight tendon of the orbicularis muscle; the nostril of that side dry, being no longer moistened by the tears which, in a healthy state, incessantly bedew these parts, but which, in this case, were discharged with the pus from the fistulous opening. My first step was to order an emollient poultice, with a view to lessen the inflammation and thickening, which speedily yielded to this application. As soon as it was in my power to examine the condition of the lachrymal passages, I introduced a probe both by the puncta and the fistulous opening; but found it impossible to get beyond the lachrymal sac. Knowing that, in order to relieve this disease, it was necessary to arm myself with patience, and frequently to repeat and vary my attempts, I inserted my probe, and threw injections into the lachrymal ducts every morning and evening for more than two months, without ever being able to reach the nasal duct, where the cause of the disease undoubtedly was seated. Despairing of success, at length, by this method, I proposed the operation, which was performed in the following manner.

The patient being placed in a chair, and her head drawn back and supported on the breast of an assistant, who held it firmly with his hands, I drew down the lower eyelid with my thumb and fore-finger, so far as perfectly to distinguish the course of the straight tendon of the orbicularis muscle, and the direction of the lachrymal sac. I then pushed the knife into the space below the tendon, and made an oblique incision from above downwards, and from within outwards, of the extent of four lines, in which the fistulous opening was included. Then substi-

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tuting my probe for the knife, I endeavoured, without success, to pass it into the nasal duct, which seemed to me to be firmly obstructed, as it did likewise to two surgical friends who were present at the operation.

I determined to keep open this small wound for forty-eight hours by means of prepared sponge, with the view of partially destroying the obstacle by the supervening suppuration. At the end of that time the operation was again undertaken, with the intention of pursuing the plan of Hunter, if it should prove impossible to recover the course of the natural passages. But I was very agreeably surprised to perceive by my instrument a removal of that obstruction in the nasal duct which, two days before, had existed in such force. Without withdrawing the bistouri, I immediately introduced, by the direction of it, a kind of curved and flexible probe, which I pushed, without much difficulty, into the cavity of the nose, as appeared by the discharge of some drops of blood from the corresponding nostril. The next object was to bring out of the nostril the lower end of the probe, in which there was a small oval opening for the purpose of introducing some threads of a cord intended to form a seton, which was designed to be enlarged every day by the addition of one or two threads, according to the necessity of dilating the canal more or less, until the obstruction should be perfectly removed. In order to accomplish this, I at first took hold of it with a forceps; but it slipped from the teeth of this intrument without being in the least brought down. It immediately occurred to me to place the groove of a director under the end of the probe, and thus to make it slide below the nostril along the course of the director; which completely succeeded, and answered all the purposes of the appropriate instrument of M. Cabanis, called *palettes*. I then fixed the seton by withdrawing upwards the probe armed with the cord, which was confined firmly along the cheek by a strip of adhesive plaster, which also prevented the access of the air. On the next day, and for several following days, the seton was renewed every morning, without occasioning the least pain to the patient, by means of a thread, tied to the fresh seton, which I took care to draw from below upwards, in order to prevent any depression or sinking of the lips of the wound. At the end of eight days, the swelling being entirely dissipated, and every circumstance proceeding as well as could be wished, I attempted, by passing a probe through the upper lachrymal punctum, to reach the

cavity

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cavity of the nose; but for several days my attempt was fruitless. The end of the instrument was constantly stopped at the orifice of the nasal duct, where I discovered an obstruction formed by a fleshy excrescence, which I removed by a small bistouri with a narrow blade. After this, the communication through the lachrymal ducts, and between the sac and the nasal duct, appeared to be free; and I took care to preserve this freedom, by passing a probe, from time to time, through the upper lachrymal punctum, and by causing to pass into the cavity of the nose a fluid injected through that punctum. I ought, however, to observe, that though it was alyays easy to introduce the probe through the upper lachrymal punctum into the cavity of the nose, the injection often failed to obtain a passage, and wholly regurgitated through the opening in the sac and the lower punctum. I could assign no other reason for this singular fact, than to suppose that the injection, by carrying along in its course a large quantity of purulent matters of different consistence, in some measure obstructed the passage, and thereby created an impediment to any further progress. However this may be, things proceeded in the manner described for more than three months, and at every dressing the seton was found to be covered with a white and well-conditioned pus in the greater part of its extent; though still some dark specks, now and then, of larger size, were to be seen in it, so as to leave not the least doubt of the existence of a considerable caries in the part. Different injections of appropriate kinds were successively employed to remove this caries; and, at the same time, the remedies adapted to correct the mass of fluids, such as aperients and evacuants, exhibited in a variety of forms, were not neglected.

Finally, after six months of assiduous dressing every morning and evening, I thought it proper to withdraw the seton, which was covered only with the natural secretion of the part; and the ulcer cicatrized without the least deformity in the affected eye, although the lips of this ulcer towards the end of the treatment, were still sufficiently wide to allow the passage of a seton, consisting of twenty-four threads of the ordinary thickness. In the beginning, indeed, I had used one composed of thirty-two threads.

This patient, whose cure has now been effected more than a year, has not since experienced any inconvenience other than a slight obstruction of the tears in the upper

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lachrymal punctum, where they assume a milky colour if not wiped once or twice a day, by pressing the finger over the punctum and duct. In all other respects the parts appear in no degree diseased, and it is only by a close inspection that any discovery can be made of an operation having been performed.

REFLECTIONS.

The Fistula Lachrymalis is a disease by no means rare, and which is too often abandoned to the unsuccessful efforts of nature. Whence does this arise? Apparently, from three sources. 1. The patient is apprehensive on account of the delicacy of the affected organ, and is alarmed, as well at the length of time necessary to accomplish a cure, as at the severity of the means employed by some practitioners in the treatment. 2. Whatever may be the method of treatment, the cure frequently fails, or is left incomplete, without the least deficiency in the assiduities or skilfulness of the surgeon. 3. Professinoal men, who so often find occasion to complain of services ill requited by the public, are unwilling to expose themselves to censure for the trifle of emolument or reputation they can expect to gain from the difficult and doubtful treatment of such cases. Still, however, when we consider the great number of publications on the diseases of the *lachrymal passages*, it seems at first view impossible to resist the belief, that the boundaries of our knowledge on this subject must surely be extended to the *ne plus ultra*. The surgeon, however, who undertakes the task of reading and of operating, will soon perceive that his predecessors have not done every thing for him that might be wished. May I be allowed briefly and explicitly to state my impressions on this subject?

It is clear there are only two modes of giving relief in *fistula lachrymalis*. It is necessary either to restore the natural passages, or to form new ones to supply their place. Among those who adopt the former plan, we may reckon Anel, Mejan, Petit, Monro, Laforet, Palluci, Pouteau, Le Cat, Louis, Heister, Cabanis, M. Desault, and a great many others. Some among these, such as Anel and Laforet, undertake the cure by probing the lachrymal passages, and by throwing injections into them, with more or less frequency, as well by the puncta as by the cavity of the nose. Others combine with this treatment the use of a cord employed as a seton, which they retain for a longer or shorter time in the lachrymal passages, and assert that, by

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by this means, they are enabled sufficiently to open the obstructed canal. This method was adopted by Mejau. A third party penetrate into the sac by making an incision in the lower eye-lid, nearly similar to that described in the case before related; but afterwards they pursue a different course to open the nasal duct. Petit employed a grooved probe, with which he forced the obstruction, and which, after this difficulty was overcome, served the purpose of introducing a bougie proportioned to the diameter of the opening. Desault employed a cord of catgut, which, in his opinion, was preferable, because it has the quality of swelling, and thereby dilating the duct, in an easy and uniform manner. Other surgeons, after clearing the duct, introduce into it, with a view of its permanently remaining there, a tube of lead, silver or gold, over which they cause the fistula to heal and cicatrize, without perplexing themselves with the unfavourable consequences sometimes resulting from this treatment. My time would not suffice to relate all the numerous varieties of practice recommended by the surgeons who appear as advocates and partizans of the plan of treating this disease by a restoration of the natural passages.

Among those, on the other hand, who have judged it most eligible to form an artificial passage for the tears (and of this number we may mention Voolhouse, St. Ives, Lamorier, Platner, Scabinger, and, above all, the celebrated Hunter), some only undertake to pierce the *os unguis* with the point of a bistouri, and to keep the passage open by means of some foreign body, which they retain there until they judge it might be withdrawn without any risk of the opening closing up; while others break through that bone, nearly in the whole of its extent, in a variety of modes; or, after the example of Hunter, they removed a piece of the bone by a suitable instrument.

As, from the results of these different modes of operating, it appears that all of them have alike succeeded in certain cases, it is natural to infer that none of them are essentially wrong, and that an appropriate selection is the only question of any importance. I conceive, therefore, that where the fistula is recent, the passages only slightly obstructed, and no callosity or caries has taken place, the method of Anel, Laforet, and Mejau, will succed. In cases of an opposite description it will be necessary to have recourse to the plan recommended by Petit, Desault and others. But when on the contrary, the lachrymal puncta, as well as the common duct, being unaffected, the nasal passage

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is destroyed by exostosis or otherwise, or the membran which lines it is become entirely callous, or its openin into the nasal cavity is so closed by adhesion as to be ren dered irrecoverable, the treatment recommended by Hun ter will in such cases alone give relief. And if (supposin even a worse case), in addition to the complicated circum stances above stated, there should be an obliteration o the puncta and ducts, even here it seems probable to me that, by means of a double operation, a course might still be procured for the passage of the tears. Dr. Anthony Petit, of Paris, in case of the destruction of the lachry-mal puncta, while the nasal duct remains free, proposes to make an artificial passage for the tears between the carun-cula lachrymalis and the edge of the lower eye-lid, and to make it in such a manner, that, after obtaining a cica-trix of this small wound, there may permanently remain an opening sufficiently large for a free passage. In such a case as this, would it not be practicable, at the same time, to open a passage into the cavity of the nose, by removing a portion of *os unguis*, according to Hunter's method, in a direction the most oblique, in order, by that means, to increase the slope of the passage for the tears? To obtain this object appears to me not only to be prac-ticable, but to be exceedingly easy.

Although the tumour of the lachrymal sac belongs not to the subject I am treating, since, properly speaking, it is not a fistula; yet as it has been so considered by some au-thors, I think it proper to observe, that both experience and reason equally prove that it ought to be managed as the simple fistula, and that if the compression so generally recommended to relieve it hath sometimes succeeded, it ought still to be regarded as only a secondary means, and merely adapted to restore to the sac the tone lost by exces-sive distension. This compression, for instance, would be quite useless in that kind of tumour of the sac observed by M. Petit, the surgeon, which is not diminished by pressure, but which remains hard, and makes constant resistance to the finger. That surgeon supposes this tumour to take place in consequence of violent inflammation, which has had the effect of obstructing, at the same time, the lachry-mal puncta and the nasal duct. The tears, then, con-tained in the lachrymal sac are sufficient to form this tu-mour, which will remain free of pain as long as they un-dergo no morbid change; but when they suffer degeneracy, and excite inflammation in the sac, a fistula may then take place, which will be more or less difficult to cure, in pro-portion

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portion to the obstacles to be encountered in the restoration of the lachrymal passages, if, indeed, it be practicable to accomplish it. But it is plain that, except the falling of tears over the cheeks, the disease may be relieved; since, for this purpose, it is only necessary to convert this fistula into a simple wound.

In this brief analysis of the different methods adopted by surgeons, I have designedly omitted to give the preference to any one; though I admit that all do not combine the same advantages. The understanding of the surgeon ought to modify his procedure according to the circumstances of the case; for it is a fact, that he will rarely operate twice in precisely the same manner. This was the opinion of the celebrated Desault, whose loss France will long have occasion to lament. And I can declare that, during three years which I passed in studying surgery under that great master, I saw him constantly varying his mode of treatment; so many resources and such facility of accommodation, had he in his creative mind.

After the account now given of the various treatment of this disease, I leave it to every one to make his remarks on that which I adopted. It may be thought that my repeated incision was unnecessary; that the probe with which I opened the nasal duct, and which is nearly like that used by Monro, would be apt to lacerate the sac, and produce dangerous inflammation; that it is difficult to withdraw it from the nostril, and, indeed, impossible in cases where the opening of the duct into the cavity of the nose is diseased in a manner sometimes observed; that the seton I used was too large; and that, by passing it through the wound, I occasioned an irregular and deformed cicatrix. To all this I have but one answer to give; I did what appeared to me to be my duty; on another occasion I shall, perhaps, act conformably to the opinion of the objector, by pursuing my own, and by attending to the indication of the moment. If, in the case above related, I have not restored the organ to its natural state, it is because it was, perhaps, impossible entirely to do so; or that in order to accomplish it, it would have been necessary, after the cure of the fistula, to inject the superior lachrymal duct continually for several months, and to pursue the plan of Mejau in all its extent. But the want of time on my part, the loss of it to the patient, already fatigued by the tediousness of the treatment, and the possibility that nature, occasionally assisted by gentle compression, might complete the rest, determined me to content myself with having freed my pa-

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tient from an ulcer, which, to say nothing else, exceedingly disfigured her. And, finally, if by pointing out what I have done, and, perhaps ought to have done, in order to obtain complete success, I can awaken the attention of my younger professional brethren, excite their emulation, and contribute any thing towards enhancing the good they may accomplish in similar cases, I shall flatter myself with the hope of having, in some measure, fulfilled the duty which every practitioner ought to feel incumbent on him, that of being useful to the profession, even although his exertions to be so should be made at the expense of his self-love.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN taking up the pen, I anticipate that the two or three ideas I shall now have to offer to you, bearing more or less directly upon animal physiology, though not strictly medical, may be received into your Journal. Perhaps you will think *nihil humani alienum* from that most curious of all subjects of contemplation.

Sitting this morning by a clock, and happening to notice, particularly, the beating of the seconds, I was forcibly struck with the recollection of being once, similarly, engaged above forty years ago, when a child, and left alone, on a visit in the country. At that time, the oscillations of the pendulum seemed to me exceedingly slow; now, they seem extremely quick. About that time the tune of '*Hearts of Oak*' was indelibly impressed upon my sensorium, from its being continually played in the processions, at a long contested election. We used, little joyous school-boys, with quickened step, to keep up with the processions. It then seemed to me a very slow going tune; during one note, we must have had to paddle forward two or three steps, while the electioneers, in their ordinary step, perhaps, marched in time. I was lately at a public dinner, when a band struck up this tune, and I was astonished at its rapidity; but I suspected at the time, that the change had been brought about, during the course of forty annual suns, in my own feelings; that time itself, the shortest portion of it, seemed shorter to me now than it did in childhood,

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childhood. The ordinary step of men in walking would have beat time to the tune, as I suppose it did when I was a little boy. My observations on the clock this morning, help to confirm me in the opinion. I believe a second of time may, naturally, appear to a child as long a portion of it as one-thirtieth, or even one-twentieth, of a minute may seem to him, who has lived, in this world, nearly half a century.

Do not the observations of all the world agree with these statements of the apparent change, the seemingly continually-accelerating rapidity of time, during active human life? Leave of absence from duty for any number of months to a veteran in service, is not to be compared with a holiday of so many weeks to a school-boy, or indeed of so many days, if he be but young enough. I remember, perfectly, on the eve of a Christmas vacation, being astonished in looking forward at it. It seemed to me a duration of almost interminable length. Enraptured, I recoiled, on myself, from the attempt to comprehend the immense field of gay pleasure which lay before me.

Do we not, generally, find our years to become shorter and shorter to us, the longer we live? On our first rising into life, looking about us, and making our observations, every thing is new; the feeling of our own existence we have scarcely yet got inured to. Life itself seems a novelty to us. It has not yet become insipid through our merely having been long accustomed to it, which seems so often to happen to those who, without objects of pursuit, are consumed with *ennui*. But the thread of human life, while it seems to be thus, generally, spun out to us individually with a continually accelerating rapidity, does evidently put on some considerable varieties, accordingly as our condition in life may be affected or diversified. The domestic character, when he first enters upon travelling, finds his days and weeks seemingly lengthened out to a duration equal to what they ever had been at the time of his childhood, when every object was new to him; while the traveller, on the other hand, detained by a contrary wind, feels a tedium in his condition that often makes the time hang heavily on his hand till he again gets under weigh; and both Plaintiff and Defendant, during a weary law-suit, sometimes find their days and nights of greater length than they ever experienced them before.

I know not whether these conditions of humanity, these modifications of our perception of time, more particularly that apparent shortening of it as we advance in life, be increasedly

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creasedly continued till old age. I have observed in people, advancing far in years, that they have had a more lively recollection of the scenes of their early life than of those of later times; perhaps, at this time, their most highly cultivated faculties beginning to be impaired, their days and weeks do not seem to hurry over with that rapidity which they did in more active life. With all their former associations, perhaps, their days have also obtained their former duration; and while they have to give so much of them to sleep, their vigils may appear lengthened to them. If this be the case, the condition of age, when not affected with disease or pain, may be more desirable than we might otherwise suppose. Even when dotage, at length, arrives, it brings a condition which, perhaps, might quite as fitly excite a feeling of envy as of pity. Such subjects I have observed to gradually, or regularly, trace back the scenes of their former life.—Present affairs escaped their notice; they thought and spoke only of those which had occupied their attention before the failing of their recollection. As they advanced further in years, they retrograded into active life, dwelt upon their pursuits at that time, and fancied themselves still engaged in them. Further advancement in years, brought the recollection of the scenes of their youth; they kept talking of their associates of those days, and seemed to enjoy themselves. A further continuance of life, brought them to a second childhood; all their former dispositions seemed to return to them; and they failed not to be, again,

> ——— by Nature's kindly law,
> Pleas'd with a rattle, tickled with a straw.

Even disease, sometimes, debilitates the mental powers, and prematurely, and only *pro tempore*, brings about these effects; of which the following little narrative, which I have heard related, both in this country and in Ireland, affords a very striking example.

A patient, much reduced under typhus, kept muttering in a way which his attendants could not understand. A Welch woman coming within hearing of him, told them that she understood every word he said; that it was all childish talk in her own native language. The patient recovered, and could only speak English. On enquiry, it appeared that when a child, his nurse, who was a Welch woman, had learned him to prattle to her in her native tongue; and in the reduced state of the system, which typhus had induced, his later acquirements had been suspended, and those of his childhood, only, had returned upon him.

J. W.

Salisbury Court, 9, vij, 1808.

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Botanical Description of British Plants.

[Continued from our last, Vol. xix. pp. 536—544.]

11. POLYPODIUM. *P. vulgare.*

Ang. Common Polypody.

Gen. Desc. Capsules disposed in distinct circular dots on the under surface of the leaf.

Spec. Desc. Leaves wing cleft; *lobes* united at the base, oblong, somewhat serrated, blunt. *Root* scaly. *Fruct.* yellowish brown, in rows, parallel to the rib of the lobes. *Old walls, shady places, at the roots of trees, v. common.* BL. June, Oct.

Use. The leaves have a weak ungrateful smell; and a nauseous sweet taste, leaving a kind of roughness and slight acrimony in the mouth.—*Lewis.* The root is sweetish; by long boiling it becomes bitter; when fresh it is a gentle purgative: an infusion of 6 drs. of it in half a pint of boiling water may be taken at twice.—*Withering.* The root was recommended by the ancients as a cathartic to purge away bile and melancholy, in the quantity of 2 drs. to a dose. The moderns have almost neglected it; those who still retain its use, recommend an aqueous extract in obstructions of the viscera, or, for a pectoral, a kind of Ptisan made of it.—*Lightfoot.* The root of the P. quercinum, or that which grows on the oak, has been most esteemed for medicinal use, though no just reason can be assigned for the preference. By the ancients it was employed as a purgative, and thought to be peculiarly useful in expelling bile and pituitous humours; therefore much used in maniacal melancholical disorders: but to act as a cathartic, the root must be exhibited in its recent state and in a large dose. It has also been recommended, and from its sensible qualities, probably with more advantage, as a pectoral or demulcent; thus joined with liquorice, its good effects have been experienced in coughs and asthmatic affections. It is now rarely used in this country; and tho' some French authors have cited instances of its success in mania, they have not been able to restore its ancient reputation in that calamitous disorder. *See Mem. de l'Ac. des Sciences,* 1751.—*Woodville.*

12. POLYPODIUM. *P. filix-mas.—Filix non ramosa. F. mas vulgare.*

Ang. Male Polypody. Male Fern.

Gen. Desc. As above.

Spec.

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Spec. Desc. Leaves almost doubly winged. *Leaflts* strap-spear-shaped; *lobes* blunt, finely serrated; *stem* and *mid-ribs* chaffy: 1 ½ to 4 feet high. *Fruct.* 3 to 8 on each lobe, in 2 rows near to its base and distant from its edges; none at the end.—*Woods, heaths, stony places.* Bl. June, Oct.

Use. The root of the male fern has lately been greatly celebrated for its effects upon the tape worm, or tænia lata; this vermifuge power of fern-root seems to have been known to the ancients. *(See Diosc. Theoph. Galen, Pliny, &c.)* and is since commended by Hoffman and other practical writers. However, though its virtues are thus recorded, the use of this root was very generally neglected, till in the hands of Mad. Noufer, a surgeon's widow in Switzerland, it acquired great celebrity, being employed by her as a secret specific for the cure of the tape worm: the secret was thought of so much importance as, after being examined by a deputation of the principal physicians of Paris, to be purchased by the King of France, and published by his order. The method of cure was as follows: after the patient has been prepared by an emollient clyster, and a lubricating supper, (of panada with butter and salt,) he is directed to take in the morning, while in bed, a dose of 2 or 3 drs. of the powdered root. (The dose for infants is one drachm.) The powder must be washed down with a draught of water; if this dose be thrown up, it must be repeated: and two hours after, the patient being kept fasting, a strong cathartic, composed of calomel and scammony is to be given, proportioned to the strength of the patient. If this does not operate in due time, it is to be followed by a dose of purging salts, and if the worm be not expelled in a few hours, this process is to be repeated at proper intervals. Of the success of this, or a similar mode of treatment, in cases of tænia, there can be no doubt, as many proofs of it, in this country, afford sufficient testimony, *(see Dr. Simmons's "Account of the Tænia;"* but whether the fern root or the strong cathartic be the principal agent in the destruction of the worm, may admit of a question; and the latter opinion seems to be more generally adopted by physicians. *(See Cullen M. M. art. Filin. Simmons pref. p. 7.)* It appears, however, from some experiments made in Germany, that the tænia has in several instances been expelled by the repeated exhibition of the root, without the assistance of any purgative. *See Gmelin. consid. gen. filicum. 34, &c.—Woodville.* Dr. Withering observes, that he has frequently used this remedy, and seldom

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dom without the desired effect. The Siberians boil this plant in their ale, and they are fond of the flavour which it imparts to it.—*Withering.*

Cryptogamia. Musci.

13. FONTINALIS. *F. antipyretica.*

Ang. Great Water-moss.

Gen. Desc. Caps. nearly sitting, furnished with a veil, and surrounded by a tiled involucrum.—Male, bud-like, axillary; on the same plant.

Spec. Desc. Caps. lateral. *Leaves* acute, heeled, doubled together, disposed in 3 rows; 2 or 3 lines long, and half as broad, v. entire at the edge. *Shoots* 1 foot long or more, branched. The primary shoot sends out lateral and terminating ones, and these branch out again; floating on the water. *Caps.* on very short fruit stalks, enclosed in a leafy scaly involucrum. *Veil* conical. *Lid* conical, blunt, starting with a spring from the ripe capsule. *Fringe* surrounding a central point. *Seeds* green.—*Upon rocks and roots of trees, in brooks, rivulets, slow streams, and ponds.* Bl. June, Sept.

Use. This plant is employed by the Scandinavians as a lining for the inside of their chimnies, to defend them against the fire: for, contrary to the nature of all other moss, this is hardly capable of burning.—*Withering.*

Cryptogamia. Hepaticæ.

14. MARCHANTIA. *M. polymorpha.*

Ang. Great Star-headed Marchantia.

Gen. Desc. Male Cal. salver-shaped: anthers numerous, imbedded in its dish. Fem. Cal. target-shaped, flowering on the under side: caps. opening at top. Seeds fixed to elastic fibres.

Spec. Desc. Leaf bluntly lobed. *Cal. of F. fl.* mostly 10 cleft. A yellowish substance resembling a lock of wool proceeds from the capsules, appearing to move within them while the seed is falling out. From 3 to 5 inches long, 1 broad, and irregularly lobed, dark green, shining. *Fruit-st.* in the angles of the lobes, 1 to 3 inches high. *Caps.* greenish, dividing into 8 or 10 segments. On the upper surface, glass-shaped conical cups, on short pedicles, with a wide and scolloped margin, which enclose about 4 little bodies, finely serrated at the edges. In figure somewhat resembling an oak-leaf; surface reticulated.—*Wet places, shady or open, moist rocks.* Bl. June, August.

Use.

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Use. A decoction of the leaves in skimmed milk are recommended as good for the jaundice and other disorders of the liver. They have a strong aromatic smell and an acid taste.—*Lightfoot.*

15. MARCHANTIA. *M. conica.*

Ang. Marchantia with warted leaves. Conic Mushroom.

Gen. Desc. *As above.*

Spec. Desc. *Leaves* forked, indented, blunt, pale green, slippery to the touch, creeping on the ground, dotted on the surface, producing new leaves from the ends of the old; in large clusters, with white tubercles. *Fem. cal.* somewhat egg-shaped, with about 5 cells underneath. *M. fl.* on the leaf, resembling warts. *Fruit-st.* 3 or 4 inches high, transparent, very tender. *Common cal.* 5 cells bursting at the base, often varying in number from some proving abortive. *Seeds* when ripe hanging out attached to threads.—*Shady brook-banks and rocks.* Bl. March, April.

Use. The leaves have a peculiar strong fragrant smell, and an acrid aromatic taste. They are supposed to possess the same attenuating quality as the first kind, but in a higher degree. They are recommended as antiscorbutic, and proper to thin the blood.—*Lightfoot.*

Cryptogamia. Algæ.

16. LICHEN. *L. calcareus.*

Gen. Desc. Male, scattered wart-like substances. Fem. smooth saucers or tubercles in which the seeds are imbedded.

Spec. Desc. *Crustaceous with tubercles; T.* black; *crust* clear white. Hard, stony, firmly fixed to the rocks, gritty when chewed, rather rough, cracked, set with minute white eminencies, white within, thickness of half a straw's breadth. *Tubercles* rarely found, scattered, not bordered, black within.—*Rocks.* Bl. Jan. Dec.

Use. When dried, powdered, and steeped in urine, it is used to dye scarlet by the Welch and by the inhabitants of the Orkneys; and the colour afforded by it, is said to be very fine. This species of L. is so peculiar to limestone rocks, that wherever that stone occurs among others, it may be distinguished at first view by this plant growing on it.—*Withering.*

17. LICHEN.

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17. LICHEN. *L. Parellus.*

Gen. Desc. As above.

Spec. Desc. Crustaceous with saucers. S. numerous, white, mealy, with yellowish white thick blunt borders, globular but depressed in the centre, larger and flatter with age; like crab's eyes. *Crust.* yellow white, thick, warty, white in its fracture, reddish when wet and rubbed to powder; wrinkled, granulated, stony to appearance, not gritty when chewed but rather tough. *Rocks, walls, stones, trunks of trees.* BL. Jan. Dec.

Use. From this species litmus is prepared: for which purpose it is gathered from the rocks in the North of England, and sent to London in casks. *Withering.*

18. LICHEN. *L. tartarens.*

Ang. Large yellow-saucered dyer's Lichen.

Gen. Desc. As above.

Spec. Desc. Crustaceous with saucers. S. yellow, with a white border sometimes scolloped, large, deeply concave. *Crust,* whitish, thickish, wide spreading, greatly wrinkled, reticulated underneath, growing on other decayed mosses. Substance rough, not gritty; acrid. It assumes various appearances: sometimes has a thinner and more uniform crust than usual, thickly covered with white tubercle-like excrescences, and free from shields, except in the centre, where they are so thickly crowded together, as to be confluent. Sometimes it grows on moss, the branches of which are surrounded with it exactly like the incrustations formed by springs abounding in a calcareous earth running over a bed of moss. *Rocks, large stones.* BL. Jan. Dec.

Use. In the Highlands of Scotland, it is much used to dye a fine claret or *pompadour* color:. For this purpose, after scraping it from the rocks, and cleaning it, they steep it in urine for a quarter of a year: then they take it out, and form it into cakes, which they hang up in bags to dry: These cakes are afterwards pulverised, and the powder is used as the dye-stuff, with the addition of alum.—*Lightfoot.* It is common in Derbyshire, and incrusts most of the stones at Urswic Mere: it is gathered for the dyers by the peasants, who sell it for a penny a pound; they can collect twenty or thirty pounds a day. It gives a fine purple colour. *Withering.*

19. LICHEN. *L. candelarius.*

Ang. Yellow farinaceous or crusted Lichen.

Gen. Desc. As above.

Spec. Desc. Crustaceous with both tubercles and saucers. *S.* orange yellow, when young; yellow, when old; *v.* numerous

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merous, greenish if wet. *Crust.* yellow, powdery when young; when old, yellow, leafy at the edge; spreading wide to a hand-breadth, moderately thick. *Leaves* wrinkled, cloven, firmly fixed, lobes blunt, pulpy, with age uniting and becoming powdery. *Fructifications* when slightly concave or flat, of an orange yellow, bordered with a paler lemon yellow, the colour of the crust. When older the *fruct.* swell into the form of tubercles, the border disappears, and the crust changes to brown yellow. *Rocks, walls, trunks of trees, old boards, old pales.* Bl. Jan. Dec.

Use. In Sweden, in the province of Smolandia, this species of *L.* is scraped from the rocks by the inhabitants, and made use of, to mix with their tallow, for the purpose of making golden candles to be burned on festival days.—*Lightfoot.*

20. Lichen. *L. Omphalodes.*

Ang. Cork, Corker, or Arcell. Kenkerig *Welsh.*

Gen Desc. As above.

Spec. Desc. Somewhat crustaceous, leaf-like, tiled loose. *Saucers* dull purple, smooth within, grey on the outside and hairy, cracked at the edge. *Leaves* hoary, smooth, blunt, many-cleft, sprinkled with rising dots, interwoven about an inch long. Colour dull purple, shining, smooth, with numerous black fibres underneath.—*Rocks.* Bl. Jan. Dec.

Use. It has been used as a styptic.—It dyes wool of a brown-reddish color, or a dull but durable crimson or purple, paler but more lasting than that of Orchal: it is prepared by the country people in Iceland by steeping it in stale wine, adding a little salt to it, and making it up into balls with lime. Wool dyed with it, and then dipped in the blue vat becomes of a beautiful purple. With rotten oak it makes a good dark brown frize. Wool dyed with red-wood or sanders, and afterwards in corker, becomes of a dark reddish brown.—*Withering.*

21. Lichen. *L. pyxidatus. L. tuberculatus.*

Ang. Common cup-moss, or Lichen.

Gen. Desc. As above.

Spec. Desc. Somewhat crustaceous, bearing cups shaped like a jelly glass. *Cups* grey green, simple, somewhat scolloped at the edge. *Tubercles* brown. *Crust* at first granulated, in time of forming the leaves (which are of no certain figure) small, cut at the edge, greenish above, white underneath. *Tubes* half to one inch high, springing from the base of the leaves, thickest upwards, and expanding at the summit like a drinking glass; scolloped at the edge, hollow

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hollow of the upper expanded part separated by a partition from the hollow of the tubular part below; light grey colour, mealy.—*Var. with cups proliferous from the centre, and edge.* — *Woods, walls, heaths, rocks, old trees.* BL. Jan. Dec.

Use. A decoction of this plant is frequently given by the common people to their children for the cure of hooping cough, but its good effects are not supported by sufficient testimonies.—*Lightfoot.*

22. LICHEN. *L. rangiferinus.*

Gen. Desc. As above.

Spec. Desc. Somewhat crustaceous, shrub-like. Tubercles brown, small, roundish, shining, black when dry, on the terminations of the branches: *plant* hoary, hollow, very much branched like coral, about two inches high; terminating branches mostly turned downwards. *Branches* perforated in the forks. Light, brittle, hoary when dry; grey, green, or whitish, tender and soft when fresh; covered with mealy particles; neither leaf nor leafy crust. *Roots* difficult to find; it adheres slightly to the earth and to mosses, from which it readily separates. — *Heaths, woods, exposed mountains.* BL. Jan. Dec.

Use. Without this plant the Laplanders could not exist; this is the food of the rein-deer, which grows fat upon it; and the rein-deer supplies every necessary of life for the contented inhabitants of that inhospitable climate.—*With.*

23. LICHEN. *L. barbatus.*

Ang. Bearded Lichen.

Gen. Desc. As above.

Spec. Desc. Somewhat crustaceous, thread-like. Tubercles flesh-coloured, small, low; plant pendant, rather jointed; branches thread-shape, expanding two feet or more in length, branches like thread, greenish white, forming together a large bush or tail: from these threads stand out lateral fibres not pendant. *Saucers* few, rarely met with, small, flesh-coloured.—*On branches of trees.* BLOSS. Jan. Dec.

Use. Its quality is astringent. When steeped for some time in water, it acquires an orange colour; and is used in Pennsylvania, according to Sillenius, to dye orange.—*Lightfoot.*

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Dr. Jackson, on Cold Affusion in Fevers.

[Continued from our last, pp. 81—89.]

The third part begins by an examination of Dr. Currie's Theory of Fever, and effects of the plan of treatment upon it. In this, much candour, much diligence, and great acuteness are evinced; but we fear the detail which Dr. J. seems to conceive impartiality obliged him to give with so much minuteness, will prove tedious to the common reader. It is hardly necessary to remark, that the principal causes of fever assigned by Dr. Currie, remote and proximate, are, as by most other writers, referred to debility, spasm, increased action, increased heat, and the association of each with the other.

Dr. Jackson next offers a statement of his own views of fever; which, without pretending to mark all the successive changes which take place, and which vary under different circumstances, according to the state of the subject and the nature of the impression, he calls an alteration in the organic actions of the system. That to describe, or even to define, fever, it is not enough to say, generally, that these actions are altered. It is necessary to mark the form of those alterations in all their varieties, and the effect of remedies on each. That to do this, a minutenes of description and accuracy of detail is necessary, beyond what can be interesting, or, perhaps, always intelligible to the common reader. On this account a publication, which professes almost a single remedy, and renders the application of that remedy simple by the facility with which the rules and the exceptions are understood, may be very properly called popular, inasmuch as whatever it teaches is within the scope of the uninstructed people. Such appears to be the object of Dr. Currie's Reports, which may, with still more propriety, be called popular, when contrasted with Dr. Jackson's, the minuteness of whose descriptions, added to the boldness of his practice, requires a habit of observation which can only be expected in those who are accustomed, or even devote their lives, to the practice of medicine.

Some pains are taken to connect the cause of fever with its cure. A short outline follows of the difference in the form of action according to the cause; and, in considering the treatment, the author begins with what he calls the preparation of subject. By this he means the reducing the subject to such a condition as may render

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render him fit for, and susceptible of, the means which are
cessary to alter those wrong actions which must, if uninterru
end in death, or a long protracted illness and slow reco
Among these he considers bleeding as the most important, when
there appear marks of local congestion, inflammation, or
sluggish and torpid action which marks incapacity in the circu
ing vessels. Various authorities are given, to show the advan
of very free bleeding. Emetics and purgatives are advised for
same purpose. All these are considered under certain circ
stances, as preparatory to the great remedy of cold affusio
"The adjustment of the balance of action and re-action, whi
held to be the base on which remedies act, is effected at one
by the operation of such means as diminish the quantity of
circulating fluids, either directly from the vessels which circu
red blood, or through some one of the emunctories which sec
and discharge superfluities; it is effected at another time, by
operation of means which solicit an equal distribution of blood
vital energy in the extreme parts; and which thus equalize
circulation of the mass, but which do not directly and evide
diminish its quantity. "I shall endeavour, says Dr. J. to desc
these different conditions with as much precision as I can, av
at the sametime that I shall be held to be tedious and irksom
many; instructive and correct, perhaps, only by a few.

"In proceeding to consider this part of the subject, I shall
notice the mode of management to be adopted in that form of f
which arises from a source of personal infection, and which is
usually distinguished by the name of *typhus*. It is, perhaps,
form of fever to which cold water may be applied with greater
pectations of success than any other—without previous prepara
of condition by means of art. It seems to arise from sources
ferently concentrated, or differently modified; and, though I
not be correct, I shall state what occurs to me on this h
1. There exists a febrile indisposition, which seems to draw
origin from a cause which is generated in crowded and ill-ventil
apartments—among persons who are not generally confined to
sick-bed. This happens frequently in jails, in ill-constructed
crowded barracks. The disease, so produced, is usually of sl
duration, its period rarely exceeding five days. It then subsi
but it often recurs again at a short interval. It is the least fi
of any of the forms of the infectious fever; and it yields more
tainly than any of the others to the affusion of cold water on
surface, particularly when the affusion is preceded by an eme
2. A form of infectious fever, the cause of which is apparently
ferred to emanations from diseased subjects, also presents it
frequently to observation. This form arises chiefly among th
who attend upon sick in hospitals, or elsewhere. Its perio
longer than that of the preceding; for it rarely reaches its ter
nation before the seventh day. It then sometimes only cha
form, and it frequently passes through another septenary rev

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tion, even sometimes two other septenary revolutions, before it terminates finally. The affusion of cold water on the surface is here ordinarily a powerful remedy in itself; but it is less sovereign than in the preceding; for, as the diseased action is strong, the mode determined and steady, the remedy does not always make impression sufficiently forcible to arrest the course abruptly and effectively—without the aid of such previous preparation as moderates the violence of the morbid action, or, as simplifies complication where that exists. 3. Infectious fever likewise presents itself, as arising apparently from a cause lodged upon clothing and such other dead matters as have been in contact with the bodies of sick persons. The cause may here be supposed to be condensed, or otherwise modified by the medium through which it is conveyed; for the effect produced actually appears with a different aspect from that of the two preceding. The movement of the morbid action is often slow and obscure; but though obscure, it is not easily acted upon, so as to be discovered by the impression of feeble powers. The course is tedious: changes generally occur at septenary periods, but the sum of the total duration frequently extends to several weeks; and in fact, the disease often assumes one or other of the forms in which the affusion of cold water on the surface does not produce abrupt and decisive effect, unless the circumstances have been changed previously by the preparation of the fit condition.—The conditions, which I have thus described, occur to me as connected with the particular form and concentration of cause; but I am ready to confess, at the same time, that their real boundaries may not be found to be so precise in all cases as I have stated them to be. It is however true, and it must have been observed by others as well as myself, that the duration of the disease is short where the source is chiefly impure air, especially as produced by the undue accumulation of persons in ill-ventilated apartments, that is, by emanations proceeding from persons, who, though they may not be in perfect health, do not yet give evidence of the existence of actual fever. The effect of the cold affusion, as mentioned before, is here effectual, — more effectual than in the others:—preparation of subject is moreover rarely required to precede its application. The duration is long, where febrile emanation from the living body is the cause solely, or in conjunction with impure air. It is perhaps still longer, where the disease arises from the contact of impure matter alone. This is supposed to be the case with those who touch infected clothing, or who come within the sphere of condensed fomes; for persons so exposed are ordinarily observed to experience a tedious disease, and one that is comparatively little tractable to the effect of usual remedies."

The subject is further pursued under a more minute examination of the various forms of infectious fever; after which the author directs our attention to endemic fevers, or fevers arising from soil. These are divided into the mild and more simple—the more violent and complicated—the tremulous or irritated—

and,

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and, lastly, the stagnated or gangrenous form. The periods are next attended to, and divided into three, as the most marked.

The next subject considered is those fevers usually called epidemic. These are divided into intermittent, remittent, low autumnal, bilious fevers, dysenteric, fevers with local affections, inflammatory and eruptive fevers. On all, excepting the last, Dr. J, is as minute as usual. On eruptive fevers, such as small-pox and the other exanthemata, he professes to have seen little, but that little is favorable to cold affusion; though no expectation is indulged that in these fevers the disease can be cut short, as was often accomplished in the former. In the measles the author never conceived himself authorized to make the experiment. A recapitulation follows of the leading circumstances in which Dr. Jackson differs from Dr. Currie, the greater part of which will be unnecessary to those who peruse the previous passages in the work itself with the accuracy they deserve; and to others, we fear, it will answer but little purpose to have dwelt so long on the controversy.

The history of cold affusion is next traced from Hippocrates to the present day; and the principles on which it is used by the author are again adverted to. In detailing the rules and reasons for the application of cold water to the surface, many ingenious arguments are adduced, to show that, besides the abstraction of heat, there appears something in the external application of water peculiarly favorable to animal and vegetable life. This is illustrated in a variety of pointed instances, many of which are constantly occurring in the common transactions of life and of military duty.

Having thus gone through the principal objects of controversy, and explained most minutely the plan of operation in the affusion of cold water in fevers, Dr. Jackson directs our attention to the effects of cold drink, and of immersion in cold water, under various circumstances of disease, or of artificially excited heat. The effects of the custom are, as in the former instance, traced through the writings of the ancient and modern authors, as well medical as historical, till we arrive at the following account of the author's experience in himself.

"In the year 1779, at Savannah, in the province of Georgia, in North America, in the excessively hot weather of the month of July, I was attacked with the fever which then prevailed at that place,—a disease which in the cooler season is intermittent, but which, in the hotter months of the year, has rarely either cold stage or distinct intermission. In the third exacerbation of the case alluded to, my desire for cold water was ravenous; in short, it appeared as if the whole force of the febrile cause was exerted in the production of inordinate thirst, for there was not at the time any other symptoms which attracted my notice. In this state of torment from raging thirst, I desired to drink cold water; and, notwithstanding the unwillingness of those who were about me to comply with my request, a jug was filled from the pump,—to the

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best of my recollection nearly a quart. This I drank at one draught; but the thirst still continued. The draught was repeated in a few minutes—but not to the same extent: the thirst was then completely extinguished, and I could not after that well say what other part of fever remained. I went to bed about the usual time, for it was then evening, and passed the night in a pleasing reverie, or slight delirium. Next morning, when the impression of light was sufficiently strong to fix my wandering ideas, I began to examine my situation; and, among other things, found the epigastric region to be much distended, but without pain, the eye slightly yellow; while, together with this, I felt unusually languid and feeble; though I perceived no remains of fever; and even these symptoms vanished in a few days, quickened in their retreat, perhaps, by some doses of calomel and rhubarb. Such is the fact; I notice it as an instance of extinguishing fever by copious draughts of cold water; but I do not notice it as an example for the imitation of the practitioner.—The experiment was made at random; and, that no evil followed from it, was probably more owing to the original soundness of my constitution than to my caution. I do not know the precise temperature of the water employed upon this occasion; but, as it was pump-water, and drank at the instant it was drawn from the pump, it may be supposed to have been somewhere about 57°: the quantity I conclude to have been near three pints.—Such was the practice, and such were the effects in my own case. It is worthy of remark that, though the fever was extinguished in the manner stated, neither vomiting, sweating, nor any other sensible evacuation ensued,—effects which are said by writers to be the usual concomitants of water drunk in the circumstances described, and in the quantity here implied. There is here some difference in point of fact, the reason of which probably is that the ancients, and those who imitate them, generally administered the cold drink only in the advanced stage of fever, frequently near a critical period, or at the height of the paroxysm—a time, at which it is not possible to ascertain what part of the effect belongs directly to the genuine operation of the remedy, what contingently to the prepared condition of the subject. The cold water was here drunk at an early period of the paroxysm: it decidedly arrested its course or changed its condition; but I cannot, in looking back upon the case, pretend to say that it did not bring life into danger. The urgency of the thirst was unusual, and the means employed to extinguish it were carried to an unusual extent. They touched the extremes, consequently the example is not a safe one for imitation. I shall, therefore, mention, from experience in my own person also, an instance of the free use of cold water in another shape,—in such a one indeed as may be supposed to come more within the rule of common practice than that related above. In the year 1778, in the month of October, I was attacked at Kingsbridge, on New-York Island, with an intermitting fever of complicated form, attended, moreover, with some untoward symptoms through the whole

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whole of its course. I took an emetic at the first accession, and afterwards a strong dose of jalap and calomel; but the type, notwithstanding the effective evacutions thereby procured, still continued uncertain and anomalous, affording no fair opportunity for the exhibition of bark. I had an utter abhorrence of every sort of food or sustenance except cold water. This I drank without measure, probably not less in quantity than two gallons *per* day. The water was excellent; and, as brought directly from a spring in a rock close to my tent, it was cool and refreshing. The pitcher stood by me:—I drank whenever I had a desire to drink, without limiting myself in quantity, and I subsisted on water alone till the seventh day, when the fever terminated of its own accord. I still recollect the grateful refreshment which it gave me; and I may add, that though the fever was not extinguished by it, nor any of its paroxysms suppressed in the manner stated above, yet, the exacerbations were evidently mitigated, and I experienced comfort and even pleasure from it, not obtainable by any other means within my command at the time."

After this account of the safety and success with which the drinking of cold water was attended in himself, Dr. Jackson thinks it right to subjoin a number of cautions; so many, indeed, as may be sufficient to deter most young practitioners from the exhibition of the remedy on any terms.

The subject of cold immersion is introduced by an account of its effects on our author himself. These were such as we have seen in some other highly sensitive subjects, a high excitement of all the animal functions bordering on fever. The case of Alexander the Great, as stated by Dr. Currie, is shown to be erroneous in the main point. Dr. Currie supposes him to have been cooled as well as debilitated; but it appears, on the evidence of Q. Curtius and Arrian, that he was extremely hot when he immersed into the river Cydnus, and suffered all those inconveniencies from his rashness, which common opinion would have taught him to expect. In this instance, we should say, Dr. Currie's eager pursuit of his favorite theory, has hurried him into an unaccountable error, did we not so frequently see similar instances in many otherwise correct writers.

Some useful remarks are subjoined by Dr. Jackson, but as they rather arise from reasoning than observation, we shall omit them to take notice of a practice of which he may be said to be the author; this is, the effect of gestation in the open air in wheel carriages or other conveyances, employed as a cure for certain conditions of fever. This remedy, like many others, was suggested by chance, and in two instances on the author's own person, before he was sufficiently aware of the advantage which might be derived from it.

"In the following year, says he, I was again attacked at Ebenezer in the province of Georgia, North America, in the month of July, with fever of unusual violence. The disease was of the form which

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the ancient Greek physicians denominate *causus*. It had scarcely any remission, though it was fundamentally of the remitting type: the anxieties at the præcordia were inexpressible; the distress scarcely supportable; the sensation of internal heat was great; the external heat little, if in any degree increased; the abdomen was colapsed and lank; the pulsation of the descending aorta strong and vibrating; the pulsation at the wrist moderate in force, perhaps weak, and not much more frequent than natural; the tongue was parched and stiff; and together with this, there was an abhorrence of drink, which appeared nauseous and loathsome. The sensations were uncomfortable, the sense of burning was tormenting; yet the surface was frequently damp, and, as judged by the touch, not hot. The desire for something moist and cool was urgent; but nothing cool was to be met with, the thermometer rarely sinking under 96° at any time of the day in the best shaded part of the house where I lay. If my foot, or any part of my body, came in contact with any thing of wool or cotton, the irritation thus produced amounted to torture: the distress was great, and with all this there was total want of sleep, a constant desire of changing place and posture—from undescribable irksomeness. In the state described, and at the 7th day of the disease, I was put, by my own desire, into an open cart, or chair as it is termed in North America, to be conveyed to Savannah, a distance of twenty-five miles. The distress and suffering were at this time at the highest pitch possible; but I cannot pretend to give an accurate idea of it in words. It comprehended the essence of torture—without local pain. I commenced my journey in the state described; but I had not travelled two miles before my uneasines had sensibly diminished; the objects around me began to attract my notice, and I began to feel pleasure in myself. It rained heavily while I was on the road; I had no protection from it, and I was as completely drenched by it as if I had been thrown into a river; but before I reached the end of my journey, I considered myself as comparatively well. I was able to sit up, to walk without help; and, when I arrived at Savannah, I had a desire to eat something salt, though for the seven preceding days I had looked at food with abhorrence, and loathed drink with a tongue stiff and parched—even scorched to insensibility by internal heat."

A more general example of the good effect of this practice occurred in the year 1780, in the 71st Regiment, in which fever in all its stages was present. The sickness was general, and the character alarming. No less than two-thirds of the regiment were in the list. At this time the enemy approached in force, and the 71st being the advanced corps, was ordered to withdraw. Some were embarked in boats, in order to be conveyed to George Town by water. It may be supposed that the least serviceable subjects, and probable the most dangerous cases were selected for this mode of conveyance. These fell into the hands of the enemy; but of about one hundred and twenty who were placed in open waggons, ill-

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ill-accommodated, exposed to night dews, scorching suns, and occasional showers, the majority were recovered or recovering by the end of the 3d day. As little or no attention could be paid to medicine during such a march, the improved health can be only imputed to the mode of gestation. A great proportion of the sick recovered whilst waiting at the first halt to take a defensive posture; others, in whom the disease had not entirely ceased, might be said to be convalescent, the form having changed from obscure remittent to that of distinct ague and fever.

The same advantages were found in the campaign in Holland, in the years 1794 and 1795, whenever it was necessary to shift the regimental hospitals and convey the sick in open carriages. In the Cove of Cork also, and in St. Domingo, the same advantages were experienced. This remedy, however, though so highly and generally valuable, is not recommended as universal. The author gives several rules for conducting it; the principal of which is, that it should be resorted to in the latter stages of fever, after natural or artificial evacuations, and where the strength seems greatly impaired.

Thus have we gone through this valuable work, which, though it contains much more useful matter than most that come before us in a much larger form; yet we are obliged to confess, might still be shortened. As this is the only objection we have to make, it is hardly necessary to add how much we recommend it to the perusal of our readers, not doubting that, like us, they will forgive this only error of the author, if they agree with us in thinking it such.

The Edinburgh Medical and Surgical Journal, No. XV.

ARTICLE 1. — *Observations on a peculiar Affection of the Testis, attended with the Growth of Fungus from that Organ; illustrated with Cases.* By WILLIAM LAWRENCE, Demonstrator of Anatomy at St. Bartholomew's Hospital.

THIS is a very candid and instructive paper. The disease, as the author observes, is by no means rare, and has too often alarmed the surgeon in such a manner, as to induce him to propose extirpation. We shall give the description in Mr. Lawrence's own words, with an additional remark or two of our own.

"The patient has generally assigned some blow, or other injury, as the cause of the complaint; in other instances, it has originated in the hernia humoralis from gonorrhœa, and sometimes has appeared spontaneously. A painful swelling of the gland, particularly characterized by its hardness, is the first appearance of the disease. After a certain length of time, the scrotum, growing gradually thinner, ulcerates; but the opening which is thus formed, instead of discharging matter, gives issue to a firm and generally insensible fungus. The surrounding integuments and cellular substance are thickened and indurated by the complaint, so that there appears to be altogether a considerable mass of

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of disease. The pain abates, and the swelling subsides considerably, when the scrotum has given way. In this state, the disorder appears very indolent; but, if the fungus be destroyed by any means, the integuments come together, and a cicatrix ensues, which is inseparably connected to the testicle.

"An examination of the part, while the fungus still remains, discloses to us the fact, that this growth has its origin in the glandular substance of the testis itself; that the coats of the part are destroyed to a certain extent; and that a protrusion of the tubuli seminiferi takes place through the aperture thus formed. I have often ascertained the continuity of the excrescences with the pulpy substance of the testis; of which we shall find more or less remaining, according to the difference in the period of the disorder. It appears to me, that the glandular part of the testis experiences an inflammatory affection in the first instance, in consequence of the violence inflicted on it; and that the confinement of the swollen substance by the dense and unyielding tunica albuginea sufficiently explains the peculiar hardness of the tumour, and the pain which is always attendant on this stage of the disorder. The absorption of the coats of the testis, and of the scrotum, obviates the tension of the parts, and thereby restores ease to the patient, at the same time that the fungus makes its appearance externally."

The only objection we have to this account is, that in the cases which have occurred to us, we have had reason to suspect suppuration had taken place from the previous inflammation in the substance of the testicle. If a testicle suppurates, the consequence will be either an absorption of the matter formed, in which case, the whole testicle will appear to waste, or else the matter must find its way to the surface. In the latter case, the progress of the matter will be preceded by adhesion of the tunica albuginea to the tunica vaginalis, of the latter to the scrotum, and a subsequent absorption of all the parts between the matter and the cuticle of the scrotum. The progress is often very slow, and after the first inflammatory symptoms have ceased, very little attended to. The consequence of this slowness, added to the different functions and texture of the parts, often is an indolence or indisposition to cicatrization. Hence the granulations continue to spring up from the suppurated testicle, which prevents the aperture in the scrotum from closing. But still the attempt is made. Hence, a pressure on the sides of the granulations, which, either by consolidation of the vessels, or by a necessity of protecting themselves, produces an unusual hardness in the fungus." Mr. Lawrence continues,

"I think it not improbable, that, if the complaint were left entirely to itself, the swelling would subside, the fungus shrink, and a complete cure ensue, without any professional assistance; but the disorder is so indolent in this stage, that a spontaneous cure would not be effected until after a very long time. The excrescence may, however, be removed by the knife, or, if the nature

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ture of its attachment permit, by ligature; or it may be freely treated with escharotic applications. The removal of the protuberance to a level with the scrotum, by means of the knife, is the shortest and most effectual mode of treatment. I can see no ground whatever for proposing castration in this malady, since in no part of its progress, nor in any of its possible consequences or effects, can it expose the patient to the slightest risk. Some may be disposed to defend the removal of the part, because it would bring the case to a more speedy termination; and if a patient, after being informed of all the circumstances, should desire the operation on this ground, the surgeon would be justified in performing it. But I think he never could be warranted in proposing so painful and dangerous a remedy as castration for a disorder attended with neither pain nor danger, and admitting of cure by a perfectly safe and mild kind of treatment."

After this, some of his readers will be surprized that he should mention, without reserve, the name of the Gentleman who actually performed the operation under the circumstances described by himself. This is, however, a mere inadvertence; but, we are much inclined to differ from the general conclusion drawn by Mr. Lawrence in the last transcribed paragraph. When a part is so far restored, and this new situation is become chronic, it rarely happens that any spontaneous effort is made towards cicatrization. The fungus will sometimes skin over, but unless a new action is excited, or unless the fungus is kept down till the scrotum can cicatrize, the disease, if it can be called such, we have reason to believe will remain. On this occasion, may it not be reasonable to ask, whether, what is called hernia of the brain, does not arise from a similar cause, that is, from the different offices and textures of the parts concerned? And if so, does not this explain how the disease is cured by retaining the scalp, and, if possible, inducing an union of its divided edges.

We are by no means disposed to urge, that the cause we have assigned is invariable, but we have many reasons for suspecting that suppuration has always preceded this formation of fungus, or growth of granulation as we would call it. Even in the case in which Mr. Lawrence's friend performed the operation, there is great reason to believe, that slight suppuration, attended as it always is, where the curative process is regular, by surrounding adhesive inflammation, may have taken place in the substance of, or immediately under the tunica albuginea. However, we are not disposed to lessen the merit of Mr. Lawrence's communication. The appearance of the part, under these circumstances, will be always formidable to young practitioners, particularly so, if he sees it before the general intumescence and pain have entirely ceased. The description was therefore much wanted, and it is here given in an intelligible and satisfactory manner.

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ARTICLE 2.—*Report of the General Hospital, near Nottingham.* By JAMES CLARKE, M. D. one of the Physicians to the Charity.

THIS is the third paper from the same quarter. It contains useful practical remarks, but most readers will think them too much detailed.

ARTICLE 3.—*Memoire sur la Mortification de la Cornée.* Par J. P. MAUNOIR, de Genéve. Translated and communicated by Dr. de Roches.

THIS article contains an useful practical remark on the delicate operation of extracting the Cataract. It is the author's opinion, that those unsuccessful operations, which are followed with considerable discharge of water and with pain, which last subsides altogether, are not the effect of matter formed, but of high inflammation terminating in gangrene of the cornea. The cause of the gangrene he conceives to be, that the section is larger than necessary for the escape of the cataract. Hence, the circulation in the cornea, scantily supplied with vessels in order to preserve its transparency, is so much impeded, that no adhesion of the cut surface can be procured, and the part dies in consequence. This is extremely rational; we see no objection to the opinion, excepting the pain which attends the process, and this may be accounted for by inflammation in the globe and eye-lids.

The translation of this paper, though we doubt not very correct, yet is not without Gallicisms, which render it obscure in some parts. The Latin quotations are also incorrectly printed, an inconvenience extremely difficult to prevent.

ARTICLE 4.—*Observations on the Nature of Inflammation, and its Connexion with Fever; communicated in a Letter to Dr. Andrew Duncan, junior.* By Dr. A. PHILIPS WILSON.

THIS paper contains several experiments on living animals, to show, that in inflammation the action of the capillary vessels is lessened, whilst the action of the larger blood vessels is increased; but we shall endeavour to do justice to Dr. Wilson by following him seriatim. He first remarks, that mere obstruction of the minuter vessels is insufficient to produce increased action in the larger, because the obstructed blood is easily carried off by the anastomosing branches, or the vessels may resist the distending force. The Doctor passed a hot wire through the web of a frog's foot. This of course, produced a shrivelling round the part. No fluid escaped; the blood was therefore obstructed, but no sign of inflammation followed.

Respecting the general opinion that the circulation is more rapid in an inflamed part, it is first shown by experiment on a living frog, that in proportion as the action of the vessels increased, the part became paler, which is accounted for by their greater constriction. Here, therefore, was increased action without the true marks of inflammation. In another instance in which inflammation

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flammation actually existed, the vessels were larger and fuller, but the motion of the blood was more languid, and in some parts where the inflammation was greatest, the circulation had ceased altogether. The smaller vessels, which in a healthy state are impervious to the red particles of the blood, were injected.

"Whilst," says Dr. Wilson, "I was viewing the inflamed web, it occurred, that if I could succeed in stimulating its vessels to action, and thus remove the inflammation, it would afford an additional proof of the inflammation depending on the debility of the vessels.

"With this view I wetted the inflamed web with distilled spirits, at the same time throwing upon it the concentrated rays of the sun from the speculum of the microscope. The blood in all the vessels, except in those of the most inflamed part, began to move with greater velocity, and in proportion as this took place, the diameters of the vessels were diminished, the redness became evidently less remarkable, and the interstices of the vessels less opaque.

"After I had despaired of restoring action to the most inflamed part, I saw the blood begin to move slowly in a vessel which ran directly through the middle of it. It soon acquired a considerable velocity; and, on taking a superficial view of the part through the microscope, the course of this vessel appeared like a streak of a lighter colour through the middle of the inflamed part.

"As I had not observed the inflammation from the commencement in this experiment, I repeated it with the assistance of the Reverend Mr. Boraston, on a small fish (the lampern.)

"We found that exposure to the air produces a degree of inflammation, evident to the naked eye, in the fins and tail of this fish. On viewing the former through the microscope, we observed the circulation become more languid, and the vessels enlarge as the inflammation came on. The motion of the blood in the most inflamed vessels at length ceased altogether.

"By gentle friction, and applying distilled spirits, we repeatedly succeeded in accelerating, and even renewing the motion of the blood; and, in proportion to the velocity of the circulation, the vessels became evidently paler, the deeper red returning as the circulation became more languid."

This experiment was repeated on the fin of a fish with nearly the same result.

To see how far the same would happen, in what are called warm blooded animals, a protruded part of the mesentery of a rabbit was brought within the field of a microscope, and irritated by the point of the forceps; the observation being made by a Gentleman unacquainted with the theory, whilst the Doctor conducted the experiment.

"The larger arteries and veins were too opaque to admit of the distinguishing the motion of the blood; but in the small vessels,

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vessels, which were more transparent, the circulation was easily observable; and I perceived the globules of the blood moving along with great rapidity, but not in sufficient quantity to give a red colour to the vessels.

"After a few minutes exposure to the air, the vessels became visibly enlarged, and in some parts assumed a reddish colour, while the velocity of the blood was proportionably diminished.

"As soon as a part of the mesentery, which lay within the field of observation, and appeared almost colourless, was irritated with a point of a small pair of forceps, a red spot appeared. In a few seconds it increased in size, the adjacent parts of the vessels were distended, and the current of blood becoming less rapid, was for some distance slightly tinged with a red colour. This enlargement of the vessels gradually extended; the circulation at this time was extremely languid, and at length was not discoverable at all."

Such then, continues the author, appears to be the state of a part under inflammation; the capillary vessels distended and debilitated; the larger arteries excited to increased action.

The increased heat with which inflamed parts are attended, must, it is added, arise from the blood parting with more caloric; but as part of this blood remains without again making its passage through the lungs, it is less in a condition to evolve caloric, than the blood of a healthy part. Mr. Hunter found by experiment, that the increased heat of inflamed parts is not more than 1 in 97 or 98; and, as by our author's experiments, the increased quantity of blood is considerably more than doubled, it follows, that less than half the above quantity of heat is evolved in a given space under inflammation from the same quantity of blood.

The increased pulsation of the larger arteries is imputed, as may be expected, to the *vis a tergo* endeavouring to expel the forward, the tardy, or stagnant blood through the capillaries. If this *vis a tergo* is insufficient, the consequence is, that the circulation ceases altogether and mortification follows.

The *vis a tergo*, we are told, is not only increased by the obstruction to be overcome, but the secretions of the inflamed part being interrupted, that portion of blood which would have been used for these secretions remains, and adds further to the stimulus on the vessels, which is gradually increased and extended backward to the heart itself.

Such are the outlines of Dr. Wilson's theory of inflammation, which, if rightly understood, will readily illustrate his theory of fever

"On reviewing," says he, "the phenomena of fever, we shall find them altogether analogous to those of inflammation, and that the experiments which have been related can be applied with the same success to explain them. The symptoms which constitute inflammation are increased heat, redness and swelling, whether attended

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attended by pain or not. In the commencement of the hot stage of fever, particularly in strong habits, the whole surface is affected with increased heat, redness, and swelling. Here, then, we know from direct experiment, that the capillaries are debilitated. The more active symptoms of inflammation do not shew themselves, because the whole capillaries being debilitated, the distending bears a small proportion to the resisting force; whereas, in inflammation, the debility of the capillaries being very partial, the resisting bears a small proportion to the distending force.

" The hot stage of fever, then, must be regarded as a state of general inflammation, (See my Essay on the Nature of Fever, pp. 186, 187); and the cold stage which precedes it, differs from the hot only in this, that the general debility of the capillaries exists with a debility of the heart and larger vessels, instead of an increased action of these organs, which always, in a short time, supervenes. For as, in inflammation, we observe, that as the capillaries of the part become debilitated, the larger vessels in their neighbourhood are excited to increased action; so, in fever, where the whole capillaries are debilitated, all the larger vessels are, for the same reason, excited to increased action.

" It has been said, that there is no proof of the excrementitious parts of the blood, when retained, proving a stimulus to the heart and larger vessels. In reply to this, it may be observed, that in all cases where they are retained, we observe the increased action of the heart and larger vessels; and as this increased action is evidently the means employed to restore the due action of the capillaries, there can be little doubt that the retained excreta are calculated to excite it; and we find that it always continues till they are expelled, or the larger vessels lose their tone. But whether this be admitted or not, the increased volume of blood in the larger vessels, which is the necessary consequence of the impediment opposed to its passage through the capillaries, must apply to them an increased stimulus, and consequently produce the phenomena which constitute the hot stage of fever.

" As, on the one hand, a debilitated state of the capillaries always produces increased action of the heart and larger vessels, so on the other, increased action of them, if long continued, never fails, from whatever cause it arises, to occasion debility in the capillaries. In my Essay on the Nature of Fever, I had occasion to observe, that when this disease terminates favourably, a degree of general debility remains after its symptoms disappear, but the action of the capillaries is so far restored, that it is in due proportion to the remaining vigour of the heart and larger vessels. In short, what now takes place throughout the system is analagous to what happens during resolution in an inflamed part. The extreme vessels are capable of effecting the necessary changes in the fluids supplied to them by the larger vessels. Thus, even the general debility which succeeds fever is a wise provision of nature;

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and thus it is, that the debility of the capillaries, and along with it, the fever, is often renewed for some time after it has ceased, by too full a diet, exercise, or any other cause that increases too much the force of the heart and larger vessels, and thus throws on the capillaries a larger quantity of the fluids than on the first return of their vigour they can easily bear. A full meal, under these circumstances, is often succeeded by a strong pulse and a dry skin."

By the analysis we have made, and the extracts transcribed, it will not be difficult to see the object of Dr. Wilson, which we were formerly obliged to confess was beyond our reach. It is not necessary that we should offer any opinion of our own, because, we are informed, that in an edition of his Treatise on Febrile Diseases, which he is now preparing for the press, the subject will be entered into more at large. Whenever that edition appears, we shall have the whole of the question before us, and then will be the time to discuss it with that candour we always wish to shew every author.

ARTICLE 5.—*An Instance of Condensed Lungs, related with a View of enquiring whether or not this Morbid State ought to be considered as of a different Kind from Inflammation or other Diseases already distinguished.*

THE subject of this case was a lady in the sixth month of her pregnancy, seized with pains in her chest, dry cough, short breathing and a shivering fit. The pain increased with the other symptoms till morning; the patient was bled; the same was repeated in the evening; the pulse small and quick, but the heart making violent efforts to contract. On the 4th day the bleeding was repeated. On the 5th, a violent pain in the head absorbed all other sensations; this induced a free application of leeches for immediate relief; with what success we are not informed, but that the patient seemed in a dying condition; and as a temporary relief, cupping with the scarifyer was directed for the chest. She miscarried, and died.

The following is the account of the dissection, with the author's remarks.

"*Dissection.*—On Thursday, April 14th, on opening the thorax, the lungs appeared not at all collapsed, but were firm like liver or spleen; the right lung was more consolidated than the left. A little semi-transparent, seemingly coagulated lymph, was found adhering to the pleura of the right side; and about eight ounces of water were taken out of the cavities of the chest, especially from the right side. The lungs being cut through in various parts and directions, the air vessels seemed obliterated, so that a very small part only of them floated on water. The right lung throughout was so dense as to sink in water. The colour in the interior was like the surface. There were no tubercles, nor vomicæ, nor thickened membranes, nor swelled glands; but the most remarkable appearance was the effusion of a turbid fluid into the trachea, so as to

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to fill it, and which, no doubt, occasioned suffocation. This turbid fluid consisted of *serum*, *water*, *slime*, or *mucus*, and some *coagulated masses* of lymph.

"There was nothing unusual about the heart, and the foramen ovale was not, (as in many cases of diseased lungs) opened. In other parts of the body nothing morbid was seen.

"*Remarks.*—From the propensity to generalize, I know that the above described disease and dissection would be referred to *inflammation*. But on consideration of the phenomena, the characters of inflammation will be found to have been absent. It is true, that effusion of watery fluids, and of coagulated lymph, and condensation, are effects frequently of inflammation; but then these effects are attended by decisive and peculiar signs of inflammation, viz. redness, thickening or enlargement, adhesions, pus, and, previously to death, by symptoms of general, or at least local inflammatory action. In the preceding case, we have neither the symptoms of pleurisy, nor of peripneumony, nor of pneumonia. The pain of the side was supposed more like a spasmodic, than an inflammatory one. Effusion of water, and secretion of slime, are not the effects peculiarly of inflammation, but of various kinds of irritation and obstruction to the circulating fluids. It seems against experience and analogy, that for three or four days, inflammation of every part of both lungs should exist, without the symptoms of that disease, and yet sufficient to occasion an universally condensed state of them. Obstruction to the passage of the blood accounts for the effused fluid into the trachea, and into the cavities of the thorax; but what occasioned the consolidated state of the lungs? The consolidated state appears to have been the original disease, not the effect of some other disease; and its occurrence to so great an extent in three or four days, has not, I believe, been seen before. The absence of orthopnœa, of buffy blood, of hard pulse, of white tongue, of expectoration, and but little of cough, or any other particular, distinguish the present disorder from other well known thoracic affections. The rapidity of its progress will not escape attention. The dyspnœa was a peculiar one. The violent attack of peculiar excruciating pains of the head is also remarkable. The state of pregnancy is, perhaps, to be regarded merely as a casual coincidence, and not as peculiarly connected with the disease. Death immediately by secretion into the trachea, I believe, has frequently been overlooked; it often occurs in infants, and accounts for unexpected deaths."

As no name is appended to this communication, we shall not be accused of want of candour in offering a few remarks on it. The author conceives the disease no way connected with pregnancy. Had nothing appeared but the effusion into the trachea, we might have been of the same opinion; but it is certain, that during pregnancy, a very extraordinary quantity of blood is often made; witness those prodigious hæmorrhages which at another time no woman could support; witness the relief which bleeding affords under most

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complaints during pregnancy; witness the great loss of food by perpetual vomiting, under which females suffer much less than at any other period. This increased quantity of blood seemed determined to the lungs, and at one time, to the head, (whether the latter was examined we are not informed.) In this unnatural state of the lungs, the cells must either burst, and the blood be effused into the air cells, or adhesive inflammation must take place to support the parts. Considering the texture of the lungs, it is obvious that if the disease continued, the adhesion must continue, till by degrees the office of the lungs would be destroyed. If, in the mean while, lymph should be extravasated into the distant branches of the bronchiæ, it would find its way to the trachea, but could not be coughed up from the condition of the lungs. All this we offer as conjecture, and should a similar case occur, if we may judge by what we have witnessed ourselves, the first bleedings, and the repetition of them, should not be measured by ounces, but by the relief experienced, and the indication of the returning symptoms.

ARTICLE 6.—*Instance of an Endemic Cynanche Parotidea, on board his Majesty's Ship Ardent, on her Passage to Monte Video.* By ANDREW NOBLE, Surgeon of the Ardent.

THIS is a very interesting paper, showing the occurrence of an endemic, which, in the course of seventeen days, attacked twelve of the crew, without any cause to which it could be attributed, either of weather or contagion. We are informed the ship had just entered the trades in the month of November; but the author should have added how long he left England, or whether he had touched at Madeira, or any other Island in his way. This is an omission which is easily remedied, and which, we doubt not, Mr. Noble will communicate, to make his paper as complete as possible. In some cases, the brain sympathized to such a degree, that it was found necessary to repeat the bleeding to a very considerable quantity; the testicles, and after them the brain, took up the action in succession with so much violence, that it was found necessary to repeat bleeding and other evacuations to very great extent. This succeeded in all, and with a rapidity proportioned to the boldness of the practice.

ARTICLE 7.—*Case of Tic Douloureux cured by Calomel and Opium.* Communicated by JAMES CORKINDALE, M. D. Member of the Royal Society of Edinburgh, and one of the Surgeons of the Royal Infirmary, Glasgow.

THOUGH this composition has been often tried without success, yet in so disheartening a disease, it is a great relief to meet any cases which have yielded to this or any other remedy.

ARTICLE 8.—*Observations on the Effect of Purgative Medicines.* By J. CHEYNE, M. D.

PURGATIVE medicines are now become such a hobby-horse, that a stranger, to read the frequent mention of them among the medical writers of this time, might fancy they were unknown or unused, till Dr. Hamilton published his useful treatise on that subject. The case

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case with which Dr. Cheyne introduces his observations, is very well worth recording; but the greater part of his subsequent remarks might have been omitted. As we have no reason to suppose that any of our readers at present are ignorant of the propriety of attending to alvine discharges in all chronic diseases, we shall decline any further notice of this part of the paper. By some quotations produced, it would appear as if some judicious, and even celebrated practitioners, were not sufficiently aware of the impropriety of strong stimulating purges in cases of inflamed bowels. The author's observations, in this respect, may be useful, but he is not sufficiently minute in describing the symptoms of inflammation. Where the pulse is small, the pain violent, the tension and tenderness considerable, the free use of the lancet, and, perhaps, of topical bleeding, is absolutely necessary: nor can we expect any advantage from purges, however strong, before we have subdued the inflammatory symptoms.

ARTICLE. 9.—*Reply to Dr. Bostock's Remarks on Mr. Ellis's Treatise on Respiration.* By Mr. DANIEL ELLIS.

NOTHING can give us greater satisfaction, than a controversy carried on like the present. We have already shown our high opinion of Mr. Ellis's labours, by the early notice we took of it in our critical analysis; we have not been less attentive to Dr. Bostock's reply. Each is replete with good sense and good manners, and we hope the correspondence will be kept up with the same zeal and temper on both sides. We shall for the present, look on as impartial spectators, till something new appears, or till we perceive something new to offer our readers.

The Inquirer occupies his corner; and it is not a little curious to see Dr. Ferriar accused of the same plagiarism as he has effectually fastened on Sterne. It appears that Lorry, in the year 1784, published a Tract on the conversion of diseases. Some passages are brought, to show the similarity of the two. The author does not seem quite aware to how much advantage Dr. Ferriar appears in the comparison. It is, indeed, afterwards said, that "in treating of a complicated series of morbid actions, there is great danger of being bewildered in the maze of chimerical notions, and this the more especially if the author sets up for a system-maker. Something of this kind, we apprehend, has happened to those who have examined the conversion of diseases before Dr. Ferriar. He has pointed out the true method of inquiry, he has added a good example to a judicious precept, and endeavoured to recal physicians to that line of study by which Hippocrates and Sydenham enjoy a sort of immortality upon earth, and at this day read lectures to all the world."

Thus, after a spice of abuse, the Doctor is brought forward in most excellent company. But poor John Hunter, in the passage immediately before us, is brought into sad disgrace, and there left without an apology.

"In one of his chapters, where he speaks of the changes which the natural powers of the body bring about, and traces the ineffec-

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tual influence of certain actions, he states most distinctly the observation which has been attributed to Mr. John Hunter, and held up by some of his over-zealous admirers as his theory of the incompatibility of similar morbid actions in the living body at the same time, which, in truth, is nothing more than a recital of facts in abstract terms: 'Id enim omnis semper medicus ante oculos habere debet, quod observatio demonstravit ab ipsius Hippocratis ævo constantissima, *naturam salubriter ad duo objecta non posse attendere* et in ipsis occupari, sed è duobus alterum ab altero hebetari et quasi excludi.'

Now, we should be glad to know in what passage Mr. Hunter ever says that two *similar* morbid actions at the same are incompatible. We have frequently heard his disciples assert, that two local diseased actions cannot be carried on in the same place, nor two diseased actions in the same constitution. But the similarity of the actions would supersede the whole theory, which only rests on the difference: and it now appears, that small-pox and cow-pox, tho' both constitutional, can go on at the same time, on account of their similarity. But it is hardly conceivable, how the writer should have overlooked the difference between the two writers. J. Hunter speaks of diseased actions, one of which will be suspended, whilst the other is proceeding. Lorry speaks of actions tending to health, one of which, he says, will be torpid, or altogether excluded by the other. This is a matter of very little consequence, as Mr. Hunter delivered his opinion before Lorry, but it is as just that Lorry should be excused from an unjust charge of plagiarism as Hunter or Dr. Ferriar.

Essays on the Morbid Anatomy of the Human Eye. By JAMES WARDROP, Fellow of the Royal College of Surgeons, of the Royal Medical and Chirurgical Societies, and one of the Surgeons of the Public Dispensary of Edinburgh. Illustrated with Plates; large 8vo. Edinburgh, 1808.

In a Preface, the Author observes, that a work professedly on the Morbid Anatomy of the Eye, is hitherto a desideratum: the Continental writers, who have principally engaged the public attention, having done but little towards illustrating their remarks by engravings. He acknowledges the information he has derived from these writers, and from the practitioners of his acquaintance, and concludes by informing us, that should the present specimen be well received, it is his intention to prosecute his plan, by considering the remaining diseases of the eye and its appendages, with the treatment which such diseases require.

Some preliminary observations follow; that all animals are composed of organs, which, under the influence of the vital principle, produce those wonderful phenomena that distinguish living organized bodies; that a knowledge of organs, is one of the objects of anatomy; that on it the surgeon builds all his theories; and

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and that it guides his hand in every operation. This, however, is only to be considered the first step.

"When," says our author, "the anatomist divided the body into regions and districts, and shaped his inquiries to suit his unnatural divisions, every organ appeared insulated and detached, the most minute parts might have been discovered and described, but their mutual connections and sympathies were unknown. Anatomy and physiology were then disjoined; the former was imperfect, and the latter could scarcely be said to exist.

"A more minute and philosophical examination of the structure and properties of the different organs, led the way to a knowledge of some of their functions, and pointed out the principles which should regulate the investigations of every rational physiologist. Haller was among the first to avail himself of the advantages of this plan. It conducted him to all his important discoveries; and it has determined the progress of every scientific inquirer since his time. To it we are indebted for almost every improvement that has been made in this branch of science; and it is the only method by which we can hope still further to augment our knowledge. In pursuing this track, the labours of modern anatomists have been well rewarded. They have freed physiology and pathology from the nonsensical conjectures by which they were so long debased, so that they now begin to assume their rank among the sciences, and in some cases to afford a safe guide to the medical practitioner."

That Haller did much towards correcting many anatomical errors and completing some researches cannot be doubted; it is, however, still doubtful whether, he has done much towards improving Physiology.—But we shall continue to transcribe.

"No one in our day has exerted himself more successfully in this field than the late celebrated Bichât. His *Anatomie Generale* is one of the most remarkable productions that has ever been produced in medical science. It has unfolded a path of investigation which was scarcely ever trodden before, and laid the foundation of a new anatomy and a new physiology. I cannot pretend here to do justice to the merits of this work, nor to give a correct view of the facts and reasonings by which his doctrines are supported. They are as numerous and various as are the parts and functions of the living body. But, as I propose, in examining the pathological anatomy of the eye, to adopt some of the principles which he has established, the following observations are necessary, in order to explain the purport and tendency of the classification which I mean to adopt.

"Most of the organs of our body are made up of a variety of elementary parts, or textures, each of which, in whatever situation it is found, affords uniformly the same physical properties. These are the elementary parts, which, by the diversity of their combinations, produce all the modifications of structure and functions which the different organs of animals exhibit. The study of

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these elementary parts, independent of the organs which they concur to form, is the object of *general* anatomy.

"This method of considering organized bodies, is not an unnatural abstraction, nor a speculative refinement. It arises from the essential nature of their constitution, and it accords with every phenomenon with which we are acquainted. We may trace it in the observations of many of the older anatomists; and it may be considered as the basis of some of the most ingenious physiological theories of the late celebrated Mr. Hunter. Although, therefore, at first sight, it may have the appearance of being arbitrary and artificial, it is nevertheless, I am persuaded, founded on the most approved principles of philosophical investigation. A knowledge of the qualities of the different parts of which our organs are composed, must afford the surest means of acquiring information concerning the functions of these organs, and of becoming acquainted with the changes which they undergo in disease. On these principles Bichât has founded his anatomical system. To numberless experiments upon living animals, he has added all the information which could be acquired by dissection. He employed chemical re-agents to supply the deficiences of the scalpel, and examined with minuteness all the varieties of morbid structure. By these means he endeavoured to fix the characters of the elementary textures, and then proceeded to investigate their combinations, as they are naturally presented to us in the different organs.

"Of these textures, he has enumerated twenty-one, all of which he has shewn to be differently organized; and hence he proves the dissimilarity of their properties, both in health and in disease. This is the ground-work of the whole fabric, and to it we must ultimateley recur in every attempt, to account either for the natural or morbid appearances which are to be met with among organized beings."

"I mean not," continues Mr. Wardrop, "to enter more minutely on the consideration of elementary textures." We should be extremely glad to learn what *elementary textures* mean, or why they are to be entered upon at all, if not to introduce some practical remarks. If the meaning was to shew that parts differently organized exhibit different phenomena when under inflammation, it would have been sufficient to trace some of those laws which Mr. Hunter has pointed out, in explaining the various forms of inflammation. We are indeed slightly referred to him and to Dr. Carmichael Smith's confused attempt at arranging the different species of inflammation; but BICHAT is the source of all our Author's speculations. Bichat has informed us, that mucous membranes, whether in the nose, the intestines, the vagina, the bladder, or in whatever part, are affected in a similar manner. It is much to be regretted, that Mr. Hunter's divisions of different kinds of inflammation, according to the nature of the parts affected, are not better known, that we might wonder less at these astonishing discoveries of M. Bichât and other foreigners.

After

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After all, it may be doubted, whether, in a practical work, the inquiry is as important as it is interesting and curious.

"The principles which I have stated," continues our author, "account admirably well for the propagation of some affections, and for some of the sympathies which subsist between different parts of the body; but there are other disorders which advance in a different manner. In some diseases which are termed chronic, for example, the whole structure of an organ becomes gradually altered, although the primary affection was confined to one of its component textures. This is often to be observed in cancer, scrofula, lues venerea, &c. When cancer attacks the mamma, it is, at its commencement, generally confined to a small portion of that organ, but if allowed to proceed, it ultimately involves the whole glandular, cellular, and cutaneous textures, in one common mass of disease."

It is far from our wish to undervalue the labours of those inquirers, who trace Nature in all her operations of disease, as well as health. But, we wish much, that every work should be *simplex et unum*. Mr. Wardrop cannot expect that these hints, for they are nothing more, can assist his readers in prosecuting such delicate enquiries, nor does the nature of his work require it. In a practical view, it is sufficient that he points out the symptoms of inflammation in the eye in its early stage. In the the progress, if one part is so much injured, that it cannot recover itself without chirurgical assistance, it is highly necessary to give us a most correct view of the parts and of the mode of relief, whether by operation, or the application of other means. By this, we wish our readers to understand, that without entering into the question concerning elements or textures, we cannot help considering the whole of Mr. Wardrop's "preliminary observations," as altogether unnecessary or useless from their brevity.—We shall therefore proceed at once to the Essays.

This part of the work is confined entirely to the diseases of the cornea, including the conjunctiva, and the membrane which lines the inside of the cornea, and also some general remarks on the sclerotic coat. The author very justly observes, that the substance or texture of the cornea, is different from any other membrane with which we are acquainted, consisting of perfectly transparent lamellæ; the sclerotica he defines a fibrous membrane, inasmuch as its fibrous texture may be traced. The conjunctiva is with more propriety called a mucous, and the internal surface forming part of the cavities of the anterior chamber of the eye, a serous membrane.

The first diseased action treated of is inflammation of the cornea. After remarking the probability, that in such cases, all the various textures of which the cornea is composed may be effected; the author proposes, for the sake of greater accuracy, to consider the appearances of each under inflammation.

The inflammation of the conjunctiva covering the cornea is first

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described. It is well distinguished from the speck of the cornea, and also from the pustule, which is formed by the membrane itself. The progress of the inflammation is accurately traced, till its termination in resolution, or in that new substance called pterygium* or pustule.

Inflammation of the proper or lamellated substance of the cornea, is next considered, and described with much accuracy through its whole progress to resolution, or its termination in suppuration or speck. The last, the author observes, "remains, and continues to be nourished by a number of red vessels." In this instance, we think Mr. Wardrop less accurate than we should have expected. Specks are sometimes formed by a mere adhesion of the various lamella in which we perceive no red vessels, yet the opacity remains. At other times, a mere effusion of lymph on the surface, obscures the proper transparency of the membrane. This last is, however, frequently absorbed, though slowly.

Three chapters follow, in which Pterygium excrescences, and pustules of the cornea, are more minutely described, and well illustrated with coloured engravings.—A suggestion is added, and strengthened by Professor Himly of Brunswick, that small pustules on the cornea are analogous to aphthæ on the fauces and alimentary canal. If they are really attended with those general symptoms described by our author, and relieved principally by attention to the constitution, there seems much propriety in the suggestion. Our own experience does not authorize us to give any opinion on the subject.

A chapter follows, on the abscess of the cornea and the anterior chamber of the eye. There is something obscure in the latter part. We perfectly agree with our author, that mucous membranes, in some stages of inflammation, 'secrete matter'; or, as Mr. Hunter calls it, take on the suppurative inflammation; but this cannot be called abscess. The collection of authorities is, however, so curious, that we shall not scruple to transcribe a part of the chapter, to show the diligence of the author in collecting useful materials for his work.

"Schiegel mentions a case of abscess of the anterior chamber, in which the pores of the cornea were so open that the matter oozed out in the form of threads. The following are his words, 'By the application of the decoction in a case of hypopion, the matter discharged itself in an uncommon manner. Whilst using it, the fine pores of the cornea were opened, and the matter oozed out in the form of fine threads. On the second day the distended cornea was considerably flatter, the oozing out of the matter continued without interruption, and in four days, nearly two drachms of matter had passed through the pores.'

"These abscesses are commonly the effect of violent ophthalmia, occasioned by blows, or injuries of the eye-ball. Richter, however

* See our Review of Scarpa.

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ever, remarks, that purulent matter sometimes collects in venereal and scrophulous patients, without any preceding inflammatory symptoms. Dr. Rutherford mentioned to me the case of a woman who was under his care in the Royal Infirmary of Edinburgh, who had a very considerable collection of matter in the anterior chamber, accompanied with very little or no inflammation. The matter altered its form and place, according to the position of the head, and, during the day, the agitation of the body, produced from walking, mixed the matter with the aqueous humour, and rendered the whole anterior chamber turbid. Janin relates a very curious case, where there was not only the absence of the inflammatory symptoms, but where the disease recurred periodically. 'About the beginning of the month of March, 1757,' says he, 'Peter Valis consulted me about a periodical blindness with which he had been affected for twelve months, during the first fifteen days of every month; and, after that time had elapsed, his eyes were restored to their natural state. I examined the organ, in order to ascertain the cause of that singular kind of blindness, and I observed that the anterior chamber of both eyes was filled with a yellow-coloured matter, so thick, as neither to allow the colour of the iris, nor the state of the pupil to be seen through it. The most remarkable circumstance in this case was, that the conjunctiva was very little inflamed, and the eye not painful.

"Richter saw a man who was blind every morning, and it was always remarked that, while the paroxysm lasted, the aqueous humour was quite turbid.

"It has been a subject of dispute, to account for the source of the matter which is formed in hypopion. It appears most probable, that as there is no ulcerated surface from which it can be derived, it is the produce of some secreting organ. There are numerous examples of the natural secretion of surfaces being altered by diseases. It is very remarkable in the mucous membranes, and in those of the serous class, to which the membrane which contains and secretes the aqueous humour belongs. When they are inflamed, it is a very common morbid appearance to observe their surfaces covered with a matter, varying from the consistence of a thick coagulated lymph to that of a thin yellow puriform fluid."

A chapter follows, on one of the sequelæ of inflammation, or abscess, viz. ulcers of the cornea. They are also traced from the application of corrosive substances and other causes. The mode of future cicatrization is accurately traced. Wounds of the cornea are next considered, and afterwards some very useful remarks follow on extraneous bodies adhering to the globe of the eye, or to different parts of it.

The chapter on the ossification of the cornea might have been enlarged; but it must be admitted, that very little practical information could have been derived from tracing a diseased action, which we have no means of altering.

The ninth chapter, on the Speck of the Cornea, is long, and arranged

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ranged with care, in proportion to the subject. The manner in which the different varieties are illustrated by engravings, prevents our doing justice by any extract or analysis. We must, therefore, content ourselves with a bare enumeration, leaving the reader to examine the work for an accurate description. Four distinct varieties are very well marked, and several less striking appearances accurately described. They are all illustrated by engravings. The following paragraph is, however, to us, by no means satisfactory; not only because we have never seen in a young subject any thing like what is very properly called *arcus senilis*, but because the drawings, to which we are referred, give by no means a satisfactory idea of that state of the eye.

"In some cases the opacity, instead of being formed towards the central part of the cornea, or at some distance from its circumference, begins at the place of the junction of the cornea and sclerotic coat, and gradually extends towards the centre of the cornea, forming an opaque ring around its circumference. Most authors have described this as an appearance only to be remarked in the eyes of old people, and have given it the name of *arcus senilis*. But I have observed it at all periods of life, and it may be seen in several of the drawings which were taken from young subjects. It generally appears like a bluish ring at the edge of the cornea, running round the whole circumference. It is almost universally to be found in the eyes of old people, and it increases in breadth as the person advances in life; but it is never attended with any impediment or inconvenience to vision."

This chapter concludes with some remarks on the formation of specks. It can hardly be questioned, that inflammation must be the cause of specks, whatever the cause of inflammation may have been. But we cannot help feeling distressed, when we see lues venerea and scrofula so perpetually brought forward as the cause of various complaints. The most accurate and rational writers are unwilling to admit that lues venerea ever occasions ulceration in the eye, and if it did, the progress of this disease is so slow, that it might always be arrested, so as to leave the eye in a perfect state. But we have never met with an author who could describe the venereal state of the eye, or ascertain when it may, like all other diseases from that source, be with certainty cured by mercury. Instead of the term scrofulous, we conceive the chronic inflammation much less exceptionable, because a more intelligible expression. The following is the author's account of the appearances of *specks* on dissection.

"When the cornea is examined after death, no change of structure can be observed in those cases where there had been a mere cloudiness, or general opacity during life; for even before death, more especially if it is slow and lingering, the fluid which, in the natural state, is deposited between the lamellæ of the cornea, exudes, forming an obscure layer over its anterior surface, and the aqueous humour oozes out, giving the cornea an unequal puckered appearance.

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appearance. Indeed, it is from this change in the eye that approaching death is often foreseen; for whenever the cornea begins to collapse, and becomes turbid, the eye loses all its lustre and intelligence, and gives that awful expression to the whole countenance, which has been called *facies hypocratica*.

"When the cornea has been much more opaque, no other change is to be perceived after death, than a diminution of the transparency, either of the external lamellæ, or of the whole substance of the cornea. I have had many opportunities, in the living body, of taking off layers of very opaque specks, and I have never been able to observe any other change, except that, in some of those which have been of long duration, the cornea had acquired a degree of hardness much greater than that of a sound cornea.

"In most cases, too, a speck bleeds when a piece of it is removed in the living body; and I have observed this happen, even when no red vessels passing into it could be detected by the naked eye. An incision made in the healthy cornea, gives little or no uneasiness, but, when the portion of a speck is removed, it often excites acute pain."

We have extracted this passage, first, because, though we passed it over before, yet we conceive this *cloudiness* of the eye, as it is here very properly called, should not be confounded with the speck; and, next, because in the instances in which we have seen the thickened cornea cut very freely, when the symptoms of inflammation were not present, the patient has never complained of much pain, perhaps of none, how great soever his fears may seem.

A chapter follows, on the staphyloma, or the prominent tumour; another on alterations in the figure of the cornea; and, lastly, one on the affusion of blood into the lamellæ of the cornea, and into the anterior chamber. At the close of the book, are seven beautiful engravings, six of them coloured, and each containing three figures, with copious explanations annexed.—Such is the nature of this work, which may claim, besides its intrinsic merit, a degree of novelty: for though some of the old French writers have given as numerous engravings of diseases in the eye, as of the attitudes in fencing, yet it would be great injustice to compare them with the performance before us. We sincerely hope the author will be encouraged to proceed; and if he is not displeased with the hints we have taken the liberty to offer, he will have ample opportunities of availing himself of them in the progress of his work.

Report

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Report of the Diseases of Edinburgh, for June 1808; by Mr. JOHN ROBERTON, *Surgeon.*

This month commenced with heavy falls of rain, which, however, only continued at irregular periods for two or three days. These were followed by fogs, probably in consequence of the prevailing easterly winds; but by the end of the first fourth of the month, the weather, particularly during the day, became very warm and pleasant. Immediately after sun-set, heavy dews uniformly prevailed, which, till sun-rise the following morning, contributed very much to refresh the verdure that had, from the great heat of the day, become parched, and but for these dews would have been much retarded in its growth. Toward the end of the month these dews abated, and the weather was delightful.

During the whole month the thermometer was variable, and the barometer, for the most part, stood high.

The diseases of this month have neither been very numerous nor very severe. No epidemic has existed that seems to have proved destructive of human life in any remarkable degree.

Ophthalmia, which had in a great measure subsided, became much worse very early in the month, and for the most part of it continued excessively troublesome to many. I have used various external applications for the alleviation of the uncommon pain accompanying it; and these applications, though seemingly different in their nature, and applied to patients apparently of a very different habit of body, were all, for the first few hours, productive of relief. Indeed, the present form of this disease can scarcely be treated by any general rule. In the course of a very short period of time, I have found it necessary, in the same patient, to apply for a few hours solutions of the vitriolic preparations, or of the preparations of lead; and in the same day, perhaps, or the following, for the same patient, I have found it requisite to order the eye to be bathed with laudanum or with ardent spirits, or anointed with a strong ointment of the red oxyd of mercury; and all of these, in their turn, were productive of the most perfect relief: but a continuance of them always did harm. The rapid changes therefore from one to another of these substances, which I was obliged to make, was in consequence of their producing very different effect to what they did when first applied.

A sort

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A sort of febrile complaint has prevailed during the month, particularly toward the end of it, of a teizing nature. The patients, for the most part, have not found it necessary to be confined to bed; but the gradual though slow exhaustion which their strength suffered, rendered them very unhappy. Most of the patients whom I have seen in this state, have recovered more quickly and more completely, by leaving the city and taking up their residence a mile or two in the country, than by almost any medicines which I could administer for their relief.

The susceptibility to inflammatory complaints seems very great in this part of the world at every period of the year. During the wet, cold months of winter, they are certainly more frequent in their occurrence, as well as more fatal in their consequences, than at any other period; and perhaps few winters have more clearly proved the truth of this observation, at least for many years past, than our last winter in this place. (See Reports for that time.) Since then, inflammatory diseases have occasionally made their appearance; and although, in general, they have never assumed such virulence as we observed among them during the winter, yet they have been sufficiently severe and numerous to constitute a very great proportion of those complaints which have made a very formidable appearance in the medical practitioner's list.

Peumonia and inflammation of the bowels still continue to prevail in many instances with considerable severity. Among those whose constitutions are not otherwise broken down by disease, bleeding or blistering, with saline purgatives, almost invariably effect a cure. With those, however, who are debilitated by age, enfeebled by vicious habits, or broken down by disease, the first of these applications must almost always be avoided, as it is seldom if ever serviceable, and often highly injurious. Dropsy, in one or other, or almost in every form, is the consequence of such treatment in the above habits; and when once induced in them, can, I may venture to say, never be removed. Alleviation may sometimes be obtained, but this is always very deceitful, and of short duration. The medical attendant, therefore, cannot be too careful in discriminating, with great caution, the habit of body, previous manner of living, &c. of patients affected with the above complaint, before employing venesection, even although several symptoms indicate the propriety of such practice. If the habit of body have been previously much injured,

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injured, greater benefit, for the most part, will be obtained by blistering than by bleeding, or any similar method which may greatly reduce the general system.

No. 4, *St. James's Street.*

An Account of Diseases in an Eastern District of London, from June 20, to July 20, 1808.

ACUTE DISEASES.		Hypochondriasis -	5
Cynanche Tonsillaris	1	Hepatitis Chronica -	3
Ephemera - -	4	Fluor Albus - -	6
Ophthalmia - -	2	Menorrhagia - -	3
Hæmoptysis - -	4	Dysuria - - -	5
Cholera - - -	3	Rheumatismus Chronicus	7
CHRONIC DISEASES.		PUERPERAL DISEASES.	
Tussis - - -	4	Ephemera - -	5
Tussis cum Dyspnœa	5	Mastodynia - -	4
Phthisis Pulmonalis	3	Hæmorrhois - -	3
Hydrothorax - -	2	INFANTILE DISEASES.	
Anasarca - -	4	Ophthalmia - -	3
Cephalalgia - -	9	Tabes Mesenterica -	1
Vertigo - - -	4	Aphthæ - - -	2
Hemiplegia - -	1	Herpes - - -	4

But a few weeks ago, the complaint of a long protracted winter was very general. The wind was blowing from east and north-east almost without interruption, and the cold was sometimes so severe as to expose invalids, and others of delicate health, to very considerable inconveniences. In some parts of June, rheumatic affections were as troublesome, and as liable to recur as in some of the earlier months. Since the beginning of the last week, the temperature of the atmosphere has undergone a most important change. The thermometer has arisen to a height, which is not only uncommon in this climate, but which can hardly be recollected by any person living. A few instances of Cholera have occurred. This disease does not in general appear at so early a period. At the latter end of August, or beginning of September, it more commonly occurs, and we must attribute its more early appearance to the uncommon heat of the weather. The cases, however, referred to in the list, were of the milder kind, and yielded pretty readily to the means which are usually employed.

INTELLIGENCE.

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INTELLIGENCE.

M. PERPERES, apothecary at Azilles, has published some curious experiments, for the purpose of ascertaining the nature of the acid formed in indigestion. From these he deduces the following results: 1. That the distention of the stomach in cases of indigestion, is occasioned by the formation of carbonic acid, arising from a commencement of decomposition, which the nutritive substances taken as food, chiefly when they are of the mucilaginous vegetable kind, have undergone. 2. That the burning pain which the digestive organ experiences, and which sometimes extends to the œsophagus, is owing to a quantity of acetous acid, formed by the complete disoxygenation of the aliment. 3. That eight ounces of roasted chesnuts produced two ounces and six drachms of acetous acid; after having fermented in the stomach an hour and a half. 4. That the method (which has at least constantly succeeded with him) for remedying this disagreeable sensation, which frequently occurs to persons who have weak stomachs, is to take after a meal ten grains of powdered colombo-root, with twelve grains of calcined magnesia, mixed together for a single dose.

Mr. ACCUM having recently analysed the water of the different springs at Cheltenham, gives the following particulars respecting the chalybeate strong saline well. The water taken fresh from the pump has a distinct saline taste with a slight impression of bitter. It is colourless, perfectly transparent, without smell, and possesses a strong refractive power. Its temperature was 55° at 29·5 barometrical pressure, the temperature of the air being 65° Fahr. Its specific gravity was as 2,039 to 2,086. On pouring the water at the fountain-head from one vessel into another, and leaving it exposed to the air, it emits a multitude of exceedingly minute air-bubbles, which firmly adhere to the inner surface of the vessel. Exposed to the open air for eight days, it suffered no material change. This spring yields upwards of 800 gallons of water in 24 hours in every season of the year.

A letter transmitted to the Navy Board, by Captain Hodgson, of his Majesty's Ship Trusty states, that the apparatus of Mr. LAMB, patentee of an invention for distilling fresh water from sea water, used in the above vessel, performed very well, and consumed less fuel than one before in use for the same purpose; that the operation of distillation does not in the least interfere with the cooking of the ship's company's meat; that when three boilers are in use, from twenty to twenty-five gallons of fresh water per hour are produced; and that though the water at first is not perfectly agreeable to the taste, though clear, yet when exposed to the air for a short time, it becomes very good. The apparatus for the Trusty was of the size calculated for a fifty gun ship.

The Society for the Relief of the Ruptured Poor, upon a Plan some time ago recommended to the Public, through the medium of several public Journals, has at length assumed a regular form. The

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Right Honourable the Lord Mayor, for the time being, is President; and the Committee for managing the affairs of this Charity, consists of twenty-four Governors, among whom are some of the first Medical Characters in the metropolis. The Governors of the City Dispensary have generously permitted the affairs of the above Institution to be conducted at their establishment in Grocer's Hall Court, Poultry; and the surgical and other officers accept of no gratuity whatever for their services; by this laudable economy the whole of the funds being exclusively devoted to the purposes of the Charity.—Each Contributor of a Guinea annually, will have a right to recommend three patients during the year, each of whom will receive a Truss, besides medical and surgical attendance. Subscriptions will be received, and Plans of the Charity may be obtained, upon application to James Amos, Esq. Devonshire Square, Bishopsgate Street, Treasurer; John Taunton, Esq. Greville Street, Hatton Garden, Surgeon to the Institution; Mr. Bartlett, at the Finsbury Dispensary; Mr. Elliott, at the City Dispensary; and Mr. A. B. Turnbull, Bolt Court, Fleet Street, Secretary.

Dr. CLOUGH, Physician and Manmidwife to the St. Mary-le-bone General Dispensary, &c. will on Monday the 8th of August, 1808, at ten in the morning, commence his Course of Lectures on Puerperal Anatomy, Physiology, and Pathology. A Syllabus, and Prospectus of which may be had of Dr. Clough, No. 68, Berners Street; J. Callow, Crown Court, Soho; and at the Dispensary, No. 77, Welbeck Street, Cavendish Square.—An Evening Course will also be given for the convenience of Students attending other Classes in the forenoon, on Tuesdays, Thursdays, and Saturdays, at seven; the first Lecture commencing on the evening of the 9th instant.

In two or three months, Mr. WATT of Paisley, will publish a work on Diabetes, consisting chiefly of "Cases and Observations." The practice Mr. W. has adopted is new, and very different from that which has been generally followed of late years.—There will also be subjoined, "Cases alluding to Diabetes," where a similar treatment has been successful.

NEW MEDICAL PUBLICATIONS.

The Syphilitic Physician; being a Treatise on the Venereal Disease. By C. Erskine, Surgeon. 2s.

The Chirurgical Candidate; or Reflections on Education, indispensable to complete Naval, Military, and other Surgeons. By Charles Dunne, Member of the Royal College of Surgeons. 8vo. 10s. 6d.

The Chirurgical Works of the late Percival Pott, F. R. S. A new edition, containing his last corrections; with Notes, and a short Account of the Life of the Author. By Sir James Earle, F. R. S. Surgeon Extraordinary to the King. 3 vol. 8vo. 1l. 7s.

The Medical Remembrancer, or Pharmaceutical Vade Mecum. By Thomas Churchill, Apothecary. 2s.

To CORRESPONDENTS.

If "HONESTAS" will take the trouble to call at No. 21, Greville Street, Hatton Garden, Mr. Taunton will answer his question.

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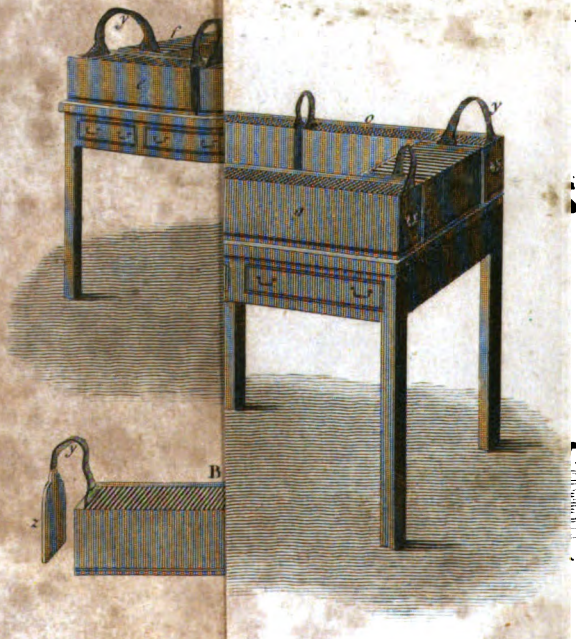

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THE

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Send you two cases, as the first of a series of papers, calculated to throw light on opinions, which have been advanced in modern times, on the cause and seat of several important disorders. Of some of these papers I find myself in possession from the favour of correspondents, and of others from the course of my own practice. The two cases now sent are of the former description. They are distinguished by a variety of curious particulars, and form suitable companions, on account of the similarity of the local treatment. These taken along with the facts, which I have stated in *Researches concerning Fever*, and indeed with the whole mass of accurate evidence, shew pretty clearly how far certain inflamed or sub-inflamed blotches in the stomach, are essential to hydrophobia in the human species. Since the alarm in 1806 and 1807, which if too violent or general, was certainly no false alarm, I have not only chanced to communicate with various practitioners, to whom cases of this terrible disorder had occurred, but endeavoured to prevail upon some others to communicate their observations to the public. Had I not been occupied in drawing up a little piece of *Advice to the Husbandman in Harvest*, and other matters, I might have renewed my solicitations. And I wish that I could draw forth any accurate journals, and dissections, not already in train for publication.

I am, &c.

THOMAS BEDDOES.

Clifton, Aug. 19, 1808.

John Dyke of Kemberton Quarters, near Shifnal, aged 9 years, was bitten by a dog supposed to be mad, on the 3d of October 1806. The following day I first saw him; the cheek and lip were lacerated in four different places,

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nearly through their substance. Muriate of antimony was applied to the parts, and this application alternately with argentum nitratum was continued at intervals for nine days, as often as the eschars were thrown off, when he neglected coming to be dressed, and the parts healed.

On Monday the 27th of October I saw him again, and learnt that he had been shivering, and poorly, for part of two days. He complained of a pain in his throat, and at the pit of his stomach. His tongue was white, the tonsils streaked with slight inflammatory lines, but not enlarged. His eyes appeared heavy, and the cornea suffused with blood in a slight degree; pulse 108, skin hot, countenance dejected. Respiration at times natural, but frequently interrupted with deep inspirations amounting to sobbing; but without any disposition to shed tears. There was resemblance to that quick mode of respiration which is produced on going into a cold bath in a gradual manner, when the water first reaches the scrobiculus cordis. He had not any sickness: but the accumulation of saliva in the mouth produced an effort to expel it, similar to the action of vomiting; and this occurred as often as a fresh accumulation took place. I offered him a little cold water to drink, when immediately the same convulsive respiration took place. When he took the cup he held it at arm's length in both hands for a few seconds, as though afraid to carry it to his mouth, which he did at length with a sudden impulse; but the instant the fluid entered his mouth, his eyes started forwards from their sockets, his shoulders and chest were elevated as if he were determined to force it down his throat, but all in vain. He spat it out with great vehemence, and appeared much agitated for some time afterwards. Upon offering him a little *warm gin and water*, the same symptoms occurred, but with less violence; and he suffered a little to pass the fauces. Upon being asked to describe the part that hurt him when swallowing, he pointed to his throat below the thyroid cartilage, and said that it also hurt him at the pit of the stomach. He had no idea whatever of the nature of his complaint; which indeed was carefully concealed from him. When a mirror was presented to him, he complained in a few seconds of its hurting his eyes. The same convulsive sobbing took place, as on the attempt to swallow water, and he turned his head aside with great expression of fear. I gave him money to induce him to look at it a second time, and endeavoured to engage his attention by desiring him to point out to me by the mirror, which of the sores had given him the greatest uneasiness at the time of dressing them; but before

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fore he had looked in it a minute, the same effect was produced as before; and upon asking him why he did not continue to look at it, he said, "it made his eyes feel like his cheek did when the burning spirits were put on it."—The cicatrices looked of a redder hue than would be thought natural, and felt a little elevated; but he did not complain of soreness upon pressure. He could swallow bread and butter; and also took a grain of opium in a pill without much difficulty; the pill was ordered to be repeated every six hours, and he was put in a warm bath up to his chin, which produced great tranquillity of countenance, and he said he could breathe much easier. Whilst in the water, he drank a tea-cup full of warm milk and water, but not without great eagerness and starting of the eyes, but with much less difficulty than before. His bowels had been perfectly open for several days.

Tuesday 28th. Symptoms much the same, but he had passed a restless night, owing to the disturbance he experienced from the saliva passing to the fauces, none of which he was able to swallow, and it was become very viscid.—The warm bath was repeated. Clysters of milk, sugar, and broth, were administered frequently; and the pills continued as before. He could still swallow a little *warm* liquid, but not without great difficulty. Upon going into the air, he complained of the cold affecting his throat and stomach, and it brought on the same sobbing as before; which was also the case whenever he was asked to drink any thing, though the liquid was not presented to him.

Wednesday 29th. Had passed a restless night; and the attendants said he had had several fits, but was perfectly sensible when out of them; other symptoms as before. Continue the glyster, baths, and opium.

Thursday 30th. Several fits during the night; was delirious, with few lucid intervals; talked incoherently of "*the waggon passing over his throat and belly;*" shewed increased affection for those who waited upon him, but still exhibited marks of distrust and fear at every thing they were doing around him. He had not past any fæces for three days past. His belly was become very hard, and much distended. Gave him 5 grains of calomel in a pill, which he swallowed very readily, and afterwards half a spoonful of Castor oil in as much broth. But this he did not get down without great difficulty. Ordered the oil and the clysters to be repeated; and to discontinue the opium till his bowels were relieved.

Friday 31st. Pulse, which had continued with little variation, was now become more feeble. Tongue very white;

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almost constant delirium; but still sensible enough to distinguish persons, and repeat the Lord's Prayer correctly, which he did voluntarily. Countenance disturbed at every attempt to swallow; but still able to get down a little broth and Castor oil; and in proportion as debility increased, the spasmodic action was diminished. Urine involuntarily; no stool; continued the clyster and Castor oil.

Saturday, Nov. 1st. Plentiful evacuations from the bowels; abdominal tumour subsided; other symptoms as before; but debility more apparent.

Sunday, Nov. 2d. Messrs. Bayley, Stanin, jun. and Bennett, saw him in the morning; he was still sensible enough to put out his tongue when asked to do so; but appeared sinking very fast. A mirror was again shewn him, but he appeared insensible to its effects. When I saw him in the evening, he was quite insensible; his pulse scarcely distinguishable; clammy perspirations; and about five o'clock, expired without a struggle. He never shewed the least vicious propensity to his attendants during his illness; nor uttered any of those peculiar sounds which have been described to occur in this malady.

Nov. 4th. DISSECTION. Upon opening the larynx and trachea, the internal membrane appeared considerably inflamed, and covered with a frothy mucus, slightly tinged with blood, extending from the glottis downwards, to the bronchiæ. The upper and anterior surface of the lungs appeared flaccid, and of a natural colour; but upon turning up the left lobe, it appeared considerably higher coloured than the anterior surface; and the pleura also appeared in a state of inflammation. The under surface of the right lobe and the pleura appeared in a similar state, but in a less degree. The heart and large blood-vessels appeared in their natural state. On opening the pharynx, the internal membrane appeared considerably inflamed; but the inflammation did not extend at all down the œsophagus, which, together with the stomach, appeared in their natural state, as did also all the abdominal viscera, except that the texture of the stomach was less firm than usual. The tongue was white and furred. The tonsils, uvula, and velum pendulum palati, did not appear at all affected. The head was not opened.

Mr. Richard Smith's Case of Hydrophobia.

DANIEL PERRY, aged 7, a native of Westbury under the Plain, Wiltshire, was admitted into the Bristol Infirmary by Mr Richard Smith, the 17th of Sept. 1807.

Two days before, he had been bitten by a dog supposed to

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to be mad, and the day after the accident had been taken to Kingroad and dipped in the salt water, as is usually done by the common people. The teeth of the animal had wounded the eye-lid slightly, and made a laceration upon the forehead, about two inches long.

The parts were severely cauterized with the calx cum kali puro, and a bread and milk poultice was applied. Due attention was paid to the bowels, but no other medicine was administered.

The sloughs having been thrown off at the expiration of five days, the granulations were immediately *destroyed again* by the paste caustic as before, and this was repeated *six times*; in fact, as often as the parts destroyed by the application were thrown off, and the os frontis almost denuded.

The lad continued cheerful, played about the ward, and took his meals with the patients without the least inconvenience during the whole of this time.

On the 21st of October, which was 34 days from the date of his admission, and 36 from the time of the accident, the lad's stomach appeared disordered, and he was ordered viii grains of ipecacuhana: he vomited, and was relieved.

On the 22d, he complained of pain in his forehead and of thirst; was languid, and made some efforts to vomit; his pulse was 120, and the pupil very much dilated; he could swallow fluids with a little difficulty; he took the mixt. salina edulcorata, and seemed better towards evening. Letters from the lad's father within a few days, having induced us to think that the dog had not been mad, we hoped that these symptoms were merely the commencement of a fever.

But on the morning of the 23d, all the symptoms were aggravated; his pulse rose to 140, his tongue was white, the fauces very red, and the difficulty of swallowing so great that he refused liquids altogether.

His breathing was laborious, and made a rattling kind of noise as if there was a fluid in the trachea; fifteen drops of opium were administered.

At mid-day the lad became suspicious, screamed out if any one attempted to come near him, and seemed in an agony if the wound was touched, or even blown upon.

He had not, however, lost his reason; and feeling uncomfortable at the frequent convulsive movements of his body, wished to be tied or held fast.

Any afforts to drink brought on violent affection of the muscles of deglutition, but there was a remarkable

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difference between attempts to drink hot or cold liquids; the convulsions produced by the latter were terrible.

At times the boy seemed not to suffer at all; he talked incessantly about his playmates, was very happy, eating cake and apple with little difficulty.

At half past 3 o'clock, P. M. his pule was 108. At 4 o'clock the temporal artery was opened, and the jugular vein, but only a few ounces of blood could be obtained; pulse rose under the bleeding to 130; the blood exhibited no marks of inflammation. A blister was applied round the throat; two drachms of mercurial ointment, camphorated, were rubbed into his thigh, and the wound sprinkled with powdered opium, the patient having previously undergone the operation of the shower bath.

He complained of being very cold and thirsty, called for water, and drank a small quantity pretty well, but soon after screamed and struggled violently.

One drachm of the powdered leaves of digitalis purpurea was macerated for an hour in six ounces of boiling water, half an ounce of which liquid was given with 15 drops of tinct. of opium.

At 5 and 6 o'clock there had been considerable reaction upon the system, but he was so feeble that the pulse was not discernible in the extremities.

At 7, he sat up, drank his warm tea with the nurse without difficulty, eat some cake, and seemed greatly mended.

At 8, the other temporal artery was wounded, but the blood would not flow; he was again placed under the shower bath, but he soon sunk to the floor perfectly exhausted, and was carried into bed.

At 10, he seemed again rather mended, but in half an hour had two violent spasms, and some singultus.

At half past 11, the shower bath was again used, but the patient soon fainting, he was wiped dry and carried to bed. Pulse not perceptible.

At 12, he was seized with an involuntary motion of the head, which continued 20 minutes.

At 20 minutes before one, he was offered some tea, and appeared willing to drink it, but had not the power to swallow it.

At half past one, (now the 24th) 15 drops of tinct. opii. were administered, in some warm tea, with considerable difficulty, several slight spasms intervening, and an hour elapsed before he could be persuaded to swallow the whole; the latter part gave him the least uneasiness.

At 2, he made a strange noise twice, resembling a good deal the mewing of a cat; in 20 minutes he swallowed a table spoonful of warm tea, without producing spasm.

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At half past 3, he began to be extremely restless.

At 4, his extremities were clammy and cold; and at 26 minutes after 4, there was a convulsion of the whole body.

At 40 minutes after 4, he became quite delirious and very restless, extremities being quite cold.

At a quarter past 5, there were several slight spasms, accompanied with groans; he now ceased to talk.

At 25 minutes past 5, subsultus tendinum came on, and in a few minutes the boy expired, without any violent symptom.

On the same day at 1 o'clock, P. M. the body was examined by Mr. Smith, in the presence of the physicians, surgeons, and students belonging to the Institution.

The pharynx, œsophagus, and trachea, exhibited no preternatural appearances, except that there was rather an unusual quantity of mucus about them.

The stomach and intestinal canal were empty, and both perfectly free from all morbid appearance, with the exception of the ileum, upon the villous coat of which the blood vessels seemed rather turgid.

The mucous membrane of the bladder seemed slightly inflamed near the cervix.

In all other respects the thoracic, abdominal, and the pelvic vicera were in every part free from any disorganization.

The dura mater exhibited unequivocal marks of inflammation, chiefly in the direction of the longitudinal sinus.

The pia mater, the substance of the cerebrum and cerebellum, the cavities, medulla oblongata and naves, exhibited nothing worthy of remark; and, in fact, with the exception of the dura mater, there was nothing in the whole examination, which, under other circumstances, would have arrested the attention.

The facts are here simply stated, and the medical reader will form his own opinion as to the nature of this horrible disease. *The antiphlogistic plan, in this case, was pushed very far, and failed of success.*

Dr. POWELL's CASE OF HYDROPHOBIA.

ANN CHANDLER, æt. 31, the mother of three children, the youngest two months old and at the breast, a woman of slight make and delicate habit, was employed in her apartment about eleven in the forenoon of Saturday, July 2, 1808, when a strange cat entered it, and immedi-

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ately fell upon a cat belonging to her. She assisted and released her own cat, and the strange one flew at her and fastened upon her right wrist, where it remained fixed for several minutes, until her screams had called up a man from the yard, who suffocated it by squeezing the neck, before it could be compelled to let go its hold.

The cat was known to have belonged to a person in the neighbourhood, and I therefore endeavoured to trace the source of its affection. Near three weeks before, a dog of the same house had been destroyed on a suspicion of madness: he was pulling the cat about that morning, but was not known to have bit her; no suspicion was therefore entertained: but early in the morning of the day on which she bit Mrs. Chandler, the servants had driven her out of the house, on account of a peculiarity and wildness which alarmed them. About three weeks before, the dog, above alluded to, had been attacked and bit severely in the street, by another which was supposed to be mad, and was killed accordingly.

The report of the existence of rabid animals had from this circumstance been previously, but very vaguely, prevalent in the neighbourhood; and, in consequence of it, she made application to some professional gentlemen, who judged, from the depth the teeth had penetrated, and the situation of the wound, near the radial artery, that no excision could be made, with effect, short of amputation of the arm: and, the circumstances related to them respecting the animal, were so indistinct, as not to justify much alarm, or so formidable a proposition. They therefore washed the wound, and directed her to keep it wet with aqua lithargyri acetati composita; and another surgeon afterwards recommended it to be poulticed. She went also to Margate, and bathed four times in the ordinary way, as an out-patient of the Infirmary there.

The wound had bled very little at first, and healed readily, leaving two small eschars on each side of the carpal extremity of the radius. She continued, however, to feel a sort of heat and trifling uneasiness in the part, which frequently recalled it to her recollection, though she never felt alarmed by it, or apprehensive as to the event.

On Thursday, July 28, the bitten part became hotter, and looked red and rather inflamed, and the pain spread more up the arm. It continued to increase in extent rather than violence, without any redness or swelling of the arm, as far as her own observation went, and at her supper on Sunday, 31st, she afterwards remembered that she did not take her porter without some difficulty. In all other respects

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pects she was much as usual, and passed the former part of that night without inconvenience or apprehension.

About three o'clock in the morning of August 1, (the 31st day from the bite,) she felt thirsty and uncomfortable, and got up for the purpose of taking some water. On reaching the vessel which contained it, she was seized with a sudden inexplicable repugnance, and compelled to put it from her; about eight she did take a small portion of tea with great effort, and, after that, her aversion to liquids became more and more insurmountable; but she suffered no noticeable inconvenience in any other respect. She had only swallowed a little jelly and a few currants through the day, and had been fully aware of her situation from the first occurrence of the hydrophobia. She had still continued to suckle her child.

At twelve at night I was desired to see her by Mr. Luke Hodgson, when she gave me the preceding history of circumstances with much precision, and firmness and calmness of mind. The bitten part looked rather red just round the eschars, but not to any extent beyond it, and less so in Mr. Hodgson's opinion than it had done in the earlier part of the day; it was not tender when pressed upon, and no part of the arm was swoln or inflamed. A pain extended from the wound up the outer side of the arm to the shoulder and right side of the neck, and there occupied the extent of that half of the trapezius muscle, not affecting in the least the left side of the spine. The glands in the axilla were not enlarged or tender; the skin was cool and natural; the pulse 110, and hurried; the respiration natural, except that there was occasional involuntary sighing, which did not appear to arise from any mental despondence; the tongue was clean; the bowels and urinary organs acted regularly; and she expressed no pain any where, neither in the throat nor in the epigastric region when it was pressed upon.

I offered her a glass of water without previous notice, and she instantly started in alarm and distress to her husband on the opposite side of the bed, but it was only alarm, she had no convulsion, nor did she refer it to any particular local sensation; I afterwards splashed some on the floor out of her sight, and she manifested much inconvenience at the sound of it; she swallowed with visible effort small bits of currant jelly, and said confidently that she should be able to take pills. She had had no sleep since the attack in the morning, neither had she felt any disposition to it. Because all the modes of practice which recurred to my recollection had been unsuccessful after the appearance

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ance of hydrophobia; because I had a conviction founded on experience, that the nitrate of silver is a most powerful medicine in some other diseases of irritability and irregular convulsion; and because it could be conveniently and safely given in the form of pill, I determined upon trying its effect in the present instance, and accordingly directed that she should take at first one grain every hour.

At nine in the morning of August 2, she was described to have passed a sleepless night, with frequent and violent fits of anxiety and loud screaming from slight causes, but most especially from flies settling on her face; this had been more strongly the case between five and six in the morning, when she could scarcely be held in her bed, and she had often prayed Mr. Hodgson to release her from her horrors by bleeding her to death. Her friends had not been able to meddle with any liquid in the room on account of the effect it produced, and which now appeared considerably increased; she had passed two natural motions and urine freely, without feeling that agitation from its sound or proximity which other liquids excited; this peculiarity, it may here be observed, continued to a more advanced period of the case; for when the noise of tea-cups, or the mention of any sort of fluid which was connected with drinking, excited the greatest effect, she passed her urine, and heard the sound as it passed, without the same inconvenience. About this time also another source of irritation was noticed, for currents of air, as the door of her apartment opened, then first became distressing to her, and this afterwards increased considerably. She had taken her pills regularly, and then took one in a small portion of jelly with hurry and effort, and expressing a desire to yield to the repugnance she felt, and to delay the attempt till it should have passed by.

Anticipating the more violent symptoms which might be expected, I urged her removal to St. Bartholomew's Hospital, near which she lived, and she and her friends yielded to the proposition without hesitation; this was effected with difficulty, though she was carried in mens' arms, on account of the wetness of the streets, and the idea of water excited by the trampling of feet in the mud.

When she had got to bed she appeared calm and comfortable; she was placed in a room separated from the ward, and great attention paid to remove every source of irritation. The pain in the neck had become more troublesome, and she could scarcely bear it to be touched. I took the opportunity of wishing her to point out its boundary, to give her a looking glass, and she did it leisurely, without any

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any inconvenience from the reflection from its surface. She expressed her desire to be supported constantly upright in bed, for that through the morning she had uniformly felt much choaking in the throat, and anxiety, if she lay down and shut her eyes. Her pulse at that period (half past eleven) was reduced to 90, her skin natural, breathing free, but still with the occasional interruption of sighing, her tongue clean, and protruded without difficulty, and her mind calm, except when under the agency of external irritations. The dose of nitrate of silver was increased to a grain and half every hour, and directions were given for its subsequent further increase.

I had directed that a clyster of strong broth, with one hundred drops of tinctura opii, should be injected; but to this, as bringing a liquid near her, she most anxiously objected, and it was not therefore urged.

Until three o'clock the paroxysms had only recurred about once an hour, and lasted at each attack nearly a minute; they much resembled those of regular hysteria, and as they increased afterwards in their duration, assumed more closely its characters. She described their commencement to be in the stomach, with a working and fulness there, and that a pricking substance passed up into her throat and choked her; she screamed suddenly, and grasped firmly hold of her attendants, as if voluntarily, and muscular convulsions came on, which were sometimes more, sometimes less general and violent.

The causes from which these paroxysms arose were extremely slight: the passage of a fly near her face, the attempt to swallow a pill, a stream of air, the sight of oil or wine, or any other liquids, even the sound of water, and other such circumstances, were sufficient; she now also complained of inconvenience from the light, which was accordingly moderated, and she expressed an anxious desire not to be left.

The tension and fullness of her breasts, and the discharge of milk from them, had become troublesome to her; they were therefore drawn by a syringe, and she expressed some distress at the first moment of its application, from the idea (as she explained herself) of liquid connected with it; but when the exhauster was once fixed this almost ceased.

The effect of sounds was peculiar, for though in the subsequent stages their influence became more general, at this period the effect was rather proportionate to the ideas they excited in her mind than to their violence; bells and other strong noises did not agitate her, but the clatter of earthen

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earthen ware, the noise of a distant pump, or any thing connected with liquids, produced the paroxysms in all their violence.

She ate a very little sweatbread boiled and then dried, and swallowed some fresh currants, the latter with less resistance than any other substance, providing carefully to pick them dry from the stalk, for if, from any breach of the skin, they happened to be wet, she rejected them with quickness and distress.

Hitherto her mind had been perfectly calm and composed during the intervals, and her conversation and behaviour most correct and proper; her conviction of the fatal termination of the case, and the sufferings she underwent, were supported with the temperate resignation and religious dependance of a superior mind; she wished to spare her connections the distress of witnessing that misery which they could not relieve, and at the same time expressed her affections towards them warmly.

From four o'clock, the impossibility of her swallowing, even a pill, was so marked, and a convulsive paroxysm so certainly the consequence of the offer, that no more were attempted to be given; and she had then taken in the whole fifteen grains, without any sensible effect.

Between four and five she had three fits, which were much stronger than the former, and one of them continued with violent muscular exertion for a quarter of an hour. She described the rising from the stomach to the throat, and a heaving and fullness as from distension by wind as preceding them, and her irritability to external objects had increased, both in its degree and objects: the light, the noise of a door shutting, the wind, even the breath of those who held her, became sources of distress. The pain shot from the back of the neck round to the angles of the jaws, the chin, and throat, the muscles of which however were not affected, except in the general distortion of the paroxysms; for when she was complaining of the violence of this pain, she could open her mouth and put out her tongue. She kept the arms of some of the attendants in a continued and firm grasp, from which she expressed satisfaction, and scarcely loosed them during the intervals.

Between five and six the paroxysms became more frequent, and their dependence upon external causes was less evident; indeed they might then be said to take place almost spontaneously, and they were attended by more restless impatience and loud screaming, and were more violent in all respects; seven such were noted within the hour.

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The sensations in her stomach and throat entirely left her, in the region of which there had at no time been any inconvenience produced by pressure. She looked pale and exhausted, and, after the paroxysms, there was a tremor and a blueness about the lips and fingers, and the pulse was weaker and more rapid; she began to complain of great soreness and tenderness about the scalp of the head, and the touch of it was immediately productive of convulsions. With these latter attacks she had considerable eructations of wind, from which she expressed herself relieved for the moment; and at half past five she first spat up a small quantity of thick viscid saliva, which she made strong voluntary efforts to keep clear of those around her, often anxiously expressing that she would not hurt any one if she could help it. Her urine passed involuntarily in the bed, and in considerable quantities, and distressed her exceedingly; her skin had become wet with perspiration from the exertions she underwent, but at this she expressed no alarm; her mind and senses were still active and quick, she heard and noticed observations made at a distance in a low tone of voice, and urged impatiently the departure of some of her friends who were near, but she was more and more irritable and uncontrolable.

From six to eight she passed in almost constant convulsions, varying in their degree of violence, with extreme irritability, and impatient of every thing about her; the accidental mention of wine threw her into agony; she complained of failure in her sight; and urged frequently and earnestly her desire to be bled to death; she expressed herself quickly and with effort, using fewer words, and those interruptedly; she had not only threatened violence towards the attendants, and that she would bite them, but had struck them vehemently more than once. She had copious eructations of air, and the secretion of viscid saliva had increased considerably, and was excreted, but with much convulsive effort; she was asked as to the affection of the stomach and throat, which she said had entirely left her; the general perspiration continued, and the urine passed copiously and involuntarily during the convulsions; the pulse was less distinct, weaker, and variable from 140 to 150.

About eight she was herself conscious that she was unmanageable, and had expressed the necessity for more restraint; she had struck and torn the clothes of those who were immediately about her, and had bit Mr. Wheeler in the hand, because he resisted her repeated wish of bleeding her to death, though to him she had previously, throughout,

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throughout, expressed her gratitude. Fortunately, the cuticle was scarcely grazed, and that part of it was immediately removed by excision. She also bit the nurse in the covered part of the arm, and left a strong impression of her teeth, but they had not perforated the clothes. The confinement of a waistcoat became on these accounts necessary, and was had recourse to.

From this period she had lost all control over her mind, and continued for almost four hours in a paroxysm of furious insanity. About half past eight she called violently for water, and when it was brought, overcame by an effort, the convulsive repugnance she visibly felt at the moment, and took it with eagerness, spilling a good deal at the same time over her, without seeming to notice it; she did this twice, and swallowed in the whole near half a pint, which in a few seconds was returned by vomiting, mixed with mucus and a greenish fluid. She also became desirous for air; and when the window was opened, expressed no inconvenience from the current. Her raving became incessant, with much invective and coarseness of language, and her efforts to release herself from restraint were violent and constant. The waistcoat, in a short time after its application, became a leading source of distress, and she used both rage and persuasion, with all the character of insanity, to get liberated from it, occasionally bartering and promising obedience, and to endeavour to drink, if she was released. She retained a perfect knowledge of those around her, and alive to external circumstances of every kind. The eructations continued to a considerable degree, sometimes accompanied by hiccough, and twice she also vomited some thin greenish fluid. For a long time her exertions appeared to consist in regulated endeavours to release herself, and not to be involuntary convulsions; but about eleven o'clock they again resumed their former character. At that time she took two spoons full of porter, which was rejected immediately; some tinctura opii was also given in cinnamon water, and rejected. The abdomen had become tense and swoln; the convulsions continued, but weaker; and she remained in this state without any violent exertion. The circumstances of her disease seemed, however, to be strongly impressed upon her mind, for she recapitulated the whole of them in a rambling and incoherent way.

At about half past twelve she sunk into an unconscious state, with slighter general muscular twitchings only, and a rapid indistinct pulse, laborious respiration, cold sweats, and coldness of extremities. From this she seemed to rally

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rally at a quarter before two, and complained of light from the candle; she took some cinnamon water with tincture of opium, but immediately vomited it, with an increase of convulsion; and died at two o'clock, forty-seven hours after the first marked occurrence of Hydrophobia.

EXAMINATION OF THE BODY.

The vessels of the brain and its membranes were much loaded with blood, and nearly half an ounce of colourless fluid was contained in the ventricles.

The intestines were much distended by air, and the peritonæum and also the pleura were in a state of unusual and remarkable dryness; there was more fluid than natural in the pericardium.

The œsophagus was contracted, and strongly marked by longitudinal rugæ; it was somewhat redder than natural, and over its whole internal surface there was spread a thin transparent membrane-like unorganized layer of coagulable lymph.

The trachea was in a natural state.

The stomach contained nearly half a pint of greenish fluid; and upon its internal surface, which was rather redder and more vascular than natural, there were, under the internal membrane, some small spots of extravasated blood collected into clusters; these were not numerous, and were chiefly found about the cardia.

The body had been previously removed to her own dwelling, and therefore we had not opportunity of making a very minute examination.

Essex Street, Strand, August 15, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THERE is an affecting history of a case of Hydrophobia given by Dr. Bardsley in the Monthly Review for August 1796, from the Memoirs of the Manchester Society, vol. iv. p. 2, on which the Reviewers agree perfectly with the Doctor, that the patient fell a victim to other causes than the poison of a rabid animal. "We have no sufficient evidence," say they, "of canine madness lying dormant for two years; we know that it may arise from accidents very different from the bite of a dog; and this poor patient's sufferings of mind and body cannot fail to excite

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excite a suspicion, that the cause here did not long precede the effect." John Lindsay, the subject of this case, had been bitten twelve years before. The conclusion of the Author and the Reviewers is most probably correct; yet, among the wonderful resources of Nature in organized bodies, on the occasion of injuries being done them, more particularly in the encystments of extraneous and hurtful substances, whereby they become so completely isolated amid all the currents, streams, distillations, &c. wherewith they are surrounded, as to be out of the reach of the influence of the almost every where acting exhalants and absorbents, these most direct roots and branches of life: even in the changes of parts in the system, such as tubes becoming solid ligaments, when the occasion for their bearing a part in the circulation ceases; and in the occasional indurations of parts which were soft, as in the attachment of the cuticle to the cutis, in cicatrices where the intervening rete mucosum has been destroyed, but which, after a number of years, is sometimes restored, when the little eschar or cicatricle completely disappears. In all these provisions in the animal economy, may we not see the possibility of a particle of the most deleterious matter, getting encysted in the minutest portion of cellular membrane, immediately enveloping it and becoming condensed and indurated around it, while the rest of the saliva of the rabid animal has been completely washed off by the blood and other effused fluid from the wound. If something like this took place in the patient at Manchester, if a particle of the virus lay enveloped in the system for twelve years, which we may perhaps fairly suppose possible if it ever certainly lie dormant for twelve months, then in the excessive sufferings of the poor man, we have perhaps directly physical explanation of the cause of canine madness taking place at the time it did. Almost famished as he must have been at the time, the absorbents avoisining the indurated, the insulated little portion of cellular membrane must have laid hold of it, and broken it down for the support of the general system; the particle of virus then no longer wrapt up in an insusceptible covering, comes in contact with some ramicle of nerve, and the man is lost.

Yours, &c.

JOHN WALKER.

London, 15, viij, 1808.

ON

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ON THE STRUCTURE AND USES OF THE SPLEEN.

By EVERARD HOME, Esq. F. R. S.

[From the last Number of the Philosophical Transactions.]

IN bringing forward a fact of so much importance, as a communication between the cardiac portion of the stomach and the circulation of the blood, through the medium of the spleen, I shall not take up the time of the Society by offering any preliminary observations, but state the circumstances which led to the discovery, and the experiments by which the different facts have been ascertained.

During the investigation of the functions of the stomach, (in which I have been lately engaged,) it was found that while digestion is going on, there is a separation between the cardiac and pyloric portions, either by means of a permanent or muscular contraction. This fact placed the process of digestion in a new light, and led me to consider in what way the quantities of different liquors, which are so often taken into the stomach, can be prevented from being mixed with the half digested food, and interfering with the formation of chyle.

Pursuing this inquiry, I found that the fluids are principally contained in the cardiac portion, and the food that has reached the pyloric portion is usually of one uniform consistence, so that the fluids beyond what are necessary for digestion, would appear to be carried out of the stomach, without ever reaching so far as the pylorus. To ascertain the truth of this opinion is the object of the present paper.

The lymphatic vessels of the stomach are numerous, but they are equally or more so in the other viscera. Many circumstances appeared to render it probable, that the spleen is the route by which liquids are conveyed. The more I considered the subject, new reasons in favour of this opinion crowded on my mind, so as almost to enforce conviction, and made me set about devising various methods, by which its truth or falshood might be established.

The first point to be decided was, whether the liquids received into the stomach do escape in any considerable quantity, when prevented from passing out at the pylorus. This was ascertained by the following experiment, made October 31, 1807, with the assistance of Mr. BRODIE, Mr. W. BRANDE, and Mr. CLIFT.

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The pylorus of a small dog was secured by a ligature, and a few minutes afterwards five ounces by measure, of an infusion of indigo in water, of the temperature of the atmosphere, were injected by the mouth into the stomach. At the end of half an hour the dog became sick, and brought up by vomiting two ounces of a nearly colourless fluid. The dog was immediately killed, and the different parts were examined. The pylorus was found completely secured by the ligature, so that nothing could pass in that direction. The pyloric portion of the stomach was found empty and contracted; the cardiac portion contained about two ounces of solid contents, enveloped in a gelatinous substance, and one ounce of water with little or no colour, the indigo being completely separated from it, and spread over the surface of the internal membrane. Of the five ounces of water thrown into the stomach, two were brought up by vomiting, and one only remained; two ounces had therefore escaped in the course of half an hour. As the stomach contained two ounces of solid food at the time the experiment was made, it is reasonable to suppose that there was also some liquid in it, and in this case the whole quantity that escaped must have exceeded two ounces. On examining the external covering of the stomach, and along the course of the vasa brevia, where the absorbents ususally pass, none were discovered, so that these vessels were not at that time carrying any liquid.

The spleen was turgid, unusually large, and its external surface very irregular; when cut into, small cells were every where met with, containing a watery fluid, and occupying a considerable portion of its substance. This appearance, which I had never seen before, made me enquire, if it had been taken notice of by others, and endeavour to ascertain the circumstances under which it is produced. The following statement contains the information which I have received on this subject.

Malpighi appears to be the first anatomist, who had any particular knowledge of the structure of the spleen. He describes its capsule, and a net-work which pervades every part of the substance. He mentions a number of small glands, which are hollow, and surrounded by arterial zones, but he had never been able to trace any venal branches into them. He believed that there was a cellular structure in the spleen containing red blood, interposed between the arteries and veins; this led him to adopt a theory that the net-work was muscular, and by its action propelled

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propelled the blood, so that there was a systole and diastole in the spleen, as in the heart.

STUKELY, in his Gulstonian lecture, has very closely copied MALPIGHI, without giving any additional information.

CUVIER, the latest writer on the subject, in his *Leçons d' Anatomie comparée*, corrects the error of MALPIGHI respecting the nature of the net-work, which he states to be composed of elastic ligament, and says that there are small corpuscles, whose use is unknown, and which disappear when the blood vessels are minutely injected.

In the course of the present investigation, I have examined the spleen after death, under the ordinary circumstances, and have found the appearances described by CUVIER. I have also examined it frequently immediately after the stomach had received unusual quantities of liquids, and in that state have found invariably, that the corpuscles of CUVIER, which were the glands of MALPIGHI, are distinct cells, containing a fluid, which escapes when the cells are punctured, and renders their membranous coat visible, so that it would appear that the distension of these cells is connected with the state of the stomach, and therefore only takes place occasionally; and that the elastic capsule by which the spleen is surrounded adapts the organ to these changes in its volume.

On examining further into the structure of the spleen, in which I have been materially assisted by Mr. BRODIE, the following facts have been ascertained.

In the spleen of the bullock, horse, and hog, the cells, when the arteries and veins are injected with coloured size, are seen to have numerous arterial branches ramifying in their coats, but no venal ones, which confirms the statement of MALPIGHI; and when the cells are empty and contracted, and the blood-vessels filled to a great degree of minuteness, the appearance of cells is entirely lost, as stated by CUVIER.

When the cells were in a distended state, their cavities in a great many instances were very distinct, having been laid open in making a section of the spleen. The intermediate parts of the spleen are but sparingly supplied with arterial branches, and the smaller ones do not appear to have any particular distribution.

When the veins only are injected their branches appear more numerous, and larger than those of the arteries, making the whole substance of the spleen of a red colour. They appear to arise from the outside of the cells, going

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off at right angles to their circumference, like radii. Where the injection has not been very minute, they are seen to arise at so many points of the capsule; but where the injection has got into smaller branches, their number is so much increased that they appear to form plexuses round the cells.

The trunk of the splenic vein, compared with that of the artery, when both are filled with wax, is found to be in the proportion of five to one in its size. This was ascertained both by an accurate measurement of their diameters, and by weighing half an inch in length of each in a very nice balance; the disproportion between them is greater, than between corresponding veins and arteries in other parts of the body.

Having acquired this knowledge of the internal structure of the spleen, I made the following experiment with a decoction of madder. The substance was employed, from the animals who feed on it having their bones tinged with red, so that there can be no doubt of its colouring matter being carried into the circulation of the blood. I was much disappointed on seeing the colour of the decoction, which, instead of being a bright red, (the tinge communicated to the bones) was of a dirty brown. The same gentlemen assisted me, as in the former experiment.

Nov. 8, 1807, seven ounces of a strong decoction of madder were injected into the stomach of a dog, immediately after the pylorus had been secured. At this time the dog voided some urine, which was limpid and colourless. In 42 minutes, 2 ounces of a yellowish fluid were brought up by vomiting. In 18 minutes more the dog vomited again; what came up proved to consist of 3½ ounces of solid matter, and 3 ounces of liquid. In 15 minutes afterwards, 5 ounces of the decoction were injected, which remained quietly on the stomach for two hours and a quarter, at the end of which period the dog was killed. In the act of dying he made water, in the quantity of two ounces, of a dark muddy colour. This was saved, and afterwards compared with the remaining liquid in the stomach, which it exactly resembled. On examining the connections between the stomach and the spleen, none of the absorbent vessels were apparent, more than in the former experiment. The pyloric portion of the stomach contained about two ounces of half digested food, but no liquid. The cardiac portion contained four ounces of liquid, and half an ounce of solid food, so that the act of vomiting, which appeared, at the time, a sufficient exertion

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tion to have completely emptied the stomach, had brought up no part of the contents of the pyloric portion, and had not even completely emptied the cardiac portion. In this experiment, without making allowance for any liquid in the stomach, prior to the decoction of madder being injected, one-fourth part of the quantity thrown in had escaped. The cells of the spleen were more distinctly seen than in the former experiment, particularly at the great end.

Although there was every reason to believe that the colouring matter of the madder had been conveyed into the urinary bladder, yet so muddy and indistinct was the colour, that it was by no means completely ascertained. I therefore resolved in my future experiments, to make use of some colouring substance, the presence of which could be detected in a very diluted state, by means of a chemical test; and I requested Mr. W. BRANDE, of whose assistance I have before availed myself, to point out the substances best fitted for this purpose. He immediately suggested that rhubarb was a substance which he had made use of as a test to ascertain the presence of alkali, and therefore had no doubt that the caustic alkali would prove a test of rhubarb. This substance has also another advantage; it is well known to pass very readily by the kidneys, without being decomposed.

The following are the results of experiments made with rhubarb, to ascertain the best modes of detecting it in the urine and blood, and the time it takes to pass from the stomach to the urinary bladder.

Five drops of tincture of rhubarb added to 3 ounces of water, are found to strike an orange tint when the test is added, which does not take place when the rhubarb is more diluted.

Six drops of tincture of rhubarb, added to three ounces of serum, are readily detected by the eye, but the colour is not heightened by applying the test; the alkali contained in the serum being sufficient to strike as bright a tint, as that quantity of rhubarb can receive from the addition of alkali.

When tincture of rhubarb is mixed with blood just taken from the arm, its colouring matter is afterwards found both in the serum and in the coagulum.

When blood is drawn from the arm of a person, who has taken rhubarb in sufficient quantity to affect the urine, the serum is found to have a slight tinge from it, equal to

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that, which one drop of tincture of rhubarb gives to half an ounce of serum when added to it.

Half an ounce of tincture of rhubarb, diluted in 1½ ounce of water, taken in the interval between meals, did not pass off by urine in less than an hour, and even then was not in sufficient quantity to be discovered till the test was applied.

The same quantity was taken immediately before a breakfast consisting of tea. In 17 minutes, half an ounce of urine was voided, which when tested had a light tinge. In 30 minutes another half ounce was made, in which the tinge was stronger; and in 41 minutes a third half ounce was made, in which it was very deep. In an hour and ten minutes 7 ounces were voided, in which the tinge of rhubarb was very weak, and in two hours twelve ounces were voided, in which it was hardly perceptible.

In 6½ hours the rhubarb acted on the bowels, and gave a decided tinge to the faeces; the urine made at the same time had a much stronger tinge, than what was voided at one hour and ten minutes.

In this experiment, the rhubarb appeared to have escaped from the cardiac portion of the stomach; and in two hours ceased to pass through that channel; but was afterwards carried into the system from the intestines, and again appeared in the urine.

This experiment was repeated on another person; the rhubarb was detected in the urine in 20 minutes. In 2 hours the tinge became very faint; in 5 hours it was scarcely perceptible; in seven hours the rhubarb acted on the bowels; and the urine made after that period, became again as highly tinged as at first.

It was suggested by a chemical friend, that the prussiate of potash might be a better substance than rhubarb, for the present experiments, since the solution of one quarter of a grain in two ounces of water, becomes of a blue colour on the addition of the acidulous muriate of iron.

To determine this point, one quarter of a grain was dissolved in two ounces of serum, but no blue colour was produced by the addition of the test, nor did this effect take place till the quantity of the prussiate was increased to a grain; so that minute quantities of the prussiate of potash, or at least of the prussic acid, may exist in the blood, without being detected by adding solution of iron.

The effects of rhubarb on the urine, and the different parts of the blood having been thus ascertained, a third experiment was made, in which that substance was employed,

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ployed, and I had the assistance of the same gentlemen as in the others.

On November 17, 1807, at 35 minutes past 11 o'clock, five drachms of a mixture of tincture of rhubarb and water, in the proportion of a drachm to an ounce, were injected into the stomach of a dog, whose pylorus was secured. At 20 minutes past 1, two ounces of fluid were brought up by vomiting: ten minutes afterwards, another ounce of the mixture was injected, as were nine drachms more at ¼ past 4 o'clock. The two last portions were retained, and at 8 o'clock in the evening the dog was killed.

On examining the parts after death, the pylorus was found to be completely secured; the stomach contained about two ounces of fluid; none of the absorbent vessels passing from its great curvature were in a distended state so as to be rendered visible. The spleen was turgid as in the former experiment, and the urinary bladder full of urine.

This urine tested by the alkali, received a deeper tinge of rhubarb than the human urine, after rhubarb had been taken three hours by the mouth, and in other respects resembled it.

When the spleen was cut into, the cells were particularly large and distinct. A portion of it was then macerated in two drachms of water for ten minutes in a glass vial. All the parts were exposed to the water, by its being divided in all directions. The water thus impregnated was strained off and tested by the alkali, and immediately the reddish brown colour was produced in the centre, and no where else, but in less than a minute it began to diffuse itself, and extended over the whole.

A similar portion of the liver was treated in the same way, and the alkali was added to the strained liquor, but no change took place in it whatever.

In this experiment the rhubarb was detected in the juices of the spleen as well as in the urine; and as there was no appearance of it in the liver, it could not have arrived there through the medium of the common absorbents carrying it into the thoracic duct, and afterwards into the circulation of the blood.

The results of the experiments already brought forward having established the fact that fluids received into the stomach, when the pylorus is closed, pass through the spleen into the circulation of the blood; it became an object to

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determine, by experiment, whether this takes place when the parts are in a natural state.

The ass appeared, on many accounts, the best subject for this purpose; and as it is made use of to teach the veterinary pupils the anatomy of that tribe of animals, I applied to the Professor for permission to make my experiments in the theatre of the college.

This was granted me in the most obliging manner; the subjects were also supplied by the College; and Mr. SEWELL, the assistant Professor, gave me his personal aid with a degree of zeal and ability I have rarely met with, and have much pleasure in acknowledging.

In making the following experiments, I had the assistance of Mr. SEWELL, Mr. BRODIE, Mr. WILLIAM BRANDE, and Mr. CLIFT.

Experiment 1. An ass, which had been kept twenty-four hours without hay, to prevent the liquor that was to be poured into its stomach from being soaked up and retained there, on the evening of the 3d of December, 1807, had a drench given it, consisting of half a pint of the spirituous tincture of rhubarb, diluted in half a pint of water. On the morning of the 4th, this was repeated at eight o'clock, and again at twelve. At two o'clock the animal was pithed, so as to destroy its sensibility, and before the circulation was entirely stopped, six ounces of blood were taken from the splenic vein into a graduated glass measure, and a similar quantity was taken from the left auricle of the heart, into a vessel of the same kind: these were allowed to coagulate and separate their serum.

The spleen was large and turgid; upon making sections of it, the cells were found to be very numerous; and towards the great end and near the edge, they were particularly distinct to the naked eye. The cut surface had a strong smell of rhubarb, and when it was applied to white paper wetted with the alkaline test, an orange tinge was produced. This was strongly contrasted by a stain made in the same manner with a section of the liver, which had no such tinge, nor did the liver give the slightest smell of rhubarb.

Infusions were made of the spleen and liver under similar circumstances; these were strained off into separate glasses, and tested by the alkali. The urine was tested in the same way. The serum, from the different portions of blood, was also poured off into separate glass vessels, to which the test was added. In nineteen hours after the blood had been taken from the viens, they were all compared

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pared together. The urine had so deep a tinge, that it nearly resembled the pure tincture of rhubarb in appearance; the others had a tinge, although in very different degrees; the quantity of rhubarb they contained was estimated by adding tincture of rhubarb to alkaline water so as to produce corresponding tints. The infusion of spleen had a tint equal to sixty drops of tincture of rhubarb in two ounces of alkaline water: the serum of the splenic vein to fifteen drops: the serum from the left auricle of the heart, to three drops. The infusion of the liver gave no orange tinge, but had it not been obscured by the red particles of the blood, it must have been equal to that of the serum from the auricle.

The connecting membrane between the stomach and spleen was attentively examined, very few absorbent vessels were seen, and these were not in a turgid state; they were traced to the chain of glands situated near the edge of the spleen, which receive the absorbents of the stomach, but none were detected passing beyond the glands, nor did the glands admit quicksilver to pass through them towards the spleen.

Exp. 2. The former experiment was repeated upon another ass, with similar results, but less strongly marked; the cause of this difference was explained by the abdominal viscera being in an inflamed state.

The urine was less impregnated with rhubarb, the infusion of the spleen had a lighter tinge, and the serum of the splenic vein had it in a still less degree; but evidently exceeding that of the serum from the vena cava inferior, opened just below the diaphragm, which was substituted for the left auricle of the heart, with a view to vary the experiment.

Exp. 3. The same experiment was made on a third ass with similar results.

Exp. 4. An ass that had been kept four days without water, and two without solid food, on the evening of the 8th of January, 1808, had a ball given it, containing half an ounce of powdered rhubarb; on the 9th, at seven o'clock in the morning, this was repeated; a third was given at nine o'clock, and a fourth at twelve. At two o'clock the ass was pithed, and four ounces of blood were taken from the splenic vein, and the same quantity from the left auricle of the heart.

The spleen was found contracted to half the size of those in the former experiments; when cut into, the cells were small, and it required a magnifying glass to see them distinctly

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tinctly. The substance was compact, and bore a near resemblance to a portion of liver; so that in this state the blood vessels, particularly the veins, must have been much contracted in their diameters.

The stomach contained about two ounces and a half of a gelatinous substance mixed with rhubarb, the small intestines were nearly empty, but the cæcum and colon contained several quarts of water, in which the rhubarb was more evident both to the sight and smell, than in the stomach.

The absorbent glands upon the edge of the colon were ranged in two rows, one on each side of the great vein, and were exceedingly numerous. In the space between these rows of glands, in some places twenty trunks of absorbent vessels could be readily counted, of a very large size.

The urine was impregnated with rhubarb, so as to acquire an orange tinge from the addition of the test; but the infusion of the spleen, and the serum of the different portions of blood, did not contain it in sufficient quantity to have the colour heightened by alkali.

Exp. 5. The last experiment was repeated upon another ass. Two ounces of blood were taken from the splenic vein, two from the large vein of the colon, and two from the inferior vena cava in the lower part of the loins.

The spleen had the same appearance as in the last experiment.

The stomach contained nearly a pint of moderately solid contents, in which the rhubarb was very evident. The small intestines were nearly empty; but the cæcum and beginning of the colon contained several quarts of liquid, strongly impregnated with rhubarb.

The absorbent glands and vessels had the same appearance as in the former experiment.

The urine when tested was found impregnated with rhubarb.

The portions of serum of the blood taken from these different veins, when tested by the alkali, appeared to be very much alike; at least that from the splenic vein was not more tinged than the others.

Exp. 6. Having been informed by Mr. Sewell, that spirituous liquors given in large quantities to horses, produce inflammation of the brain, and sometimes death, and this information having been in some measure confirmed by an ass in a weakly state, that had taken half a pint of the spirituous tincture of rhubarb in the evening, dying in the night, I thought it right to make a comparative

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tative experiment with the infusion of rhubarb, to determine whether the result would be the same as with the tincture.

February 9, 1808. An ass had a pint of infusion of rhubarb given to it in the evening; the same dose was repeated at six o'clock in the morning of the 10th; and again at nine o'clock, and at twelve. At two o'clock the animal was pithed, and two ounces of blood were taken from the splenic vein, two from the vein of the colon, and two from the inferior vena cava in the lower part of the loins.

The spleen was found turgid, and large; when the cut surface was rubbed on white paper, the orange tint was very evident without any test applied to it, particularly so, when compared with a similar stain made by a section of the liver, in which there was no such tinge.

In the stomach and duodenum, the rhubarb was found in large quantities; but none was met with in the cæcum.

The urine was impregnated with rhubarb, the orange tint upon the application of the alkali being very distinct.

At the end of twenty hours, the serum of the splenic vein had a tinge equal to four drops of the tincture of rhubarb in two ounces of alkaline water; that of the vein of the colon and vena cava was less distinct.

The effects of the infusion of rhubarb on the spleen, the serum of the blood and the urine, corresponded exactly with that of the tincture in the former experiments, but was in a less degree of intensity.

In the course of these experiments, an attempt was made to ascertain whether the blood in the splenic vein has a greater proportion of serum than in the other veins of the body, and the general results were in favour of such an opinion; but it will appear from what follows, that the quantity of serum separated in twenty-four hours, is by no means a just criterion of the proportion which the blood contains.

Experiment 1. Three ounces of blood from the arm of a healthy person were received into a graduated glass vessel, previously cooled to the temperature of 32°, three more into a second glass of the temperature of 50°, and three into a third at 70°. The three glasses were brought into a room, the temperature of which varied from 40° to 50°. At the end of nineteen hours, the serum was found in the following quantities.

In the glass at	32°	9 drachms.
	50°	11
	70°	10

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The blood did not flow so freely into the glass at the highest temperature, as into the other two.

Exp. 2. This experiment was repeated, and the serum examined at the end of forty-three hours.

In the glass at 32° 12 drachms.
50° 12
70° 13

Exp. 3. It was repeated, and the serum examined at the end of 67 hours.

In the glass at 32° 11 drachms.
50° 11½
70° 11½

Exp. 4. It was repeated, and the serum measured at the end of ninety hours.

In the glass at 32° 11½ drachms.
50° 13
70° 10½

The blood did not flow so readily into the glass at the highest temperature as into the other two.

From the experiments, it appears that the serum separates in larger quantity, when the blood is received into a vessel at the temperature of 70°, than at 50° or 32°; this, however, is prevented from taking place by the blood not flowing readily from the vein.

From these experiments on the spleen contained in this, and the foregoing part, the following facts appear to have been ascertained.

That the spleen is met with in two very different states, one which may be termed the distended, the other the contracted, and that in the one its size is double what it is in the other. In the distended state there is a distinct appearance of cells containing a limpid fluid, distinguishable by the naked eye; in the contracted, these only become distinct when seen through a magnifying glass. The distended state takes place when the stomach has received unusual quantities of liquids before the animal's death; and the contracted state, when the animal has been kept several days without any drink before the spleen is examined.

That the trunk of the splenic vein (of the hog) is more than five times the size of the trunk of the splenic artery.

That when the pylorus is secured, coloured liquids pass from the cardiac portion of the stomach into the circulation of the blood, and go off by the urine; and while this is going on, the spleen is in its most distended state, and the colouring matter is found in its juices, although it is not

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not to be detected in those of the liver. The colouring matter cannot therefore be conveyed to the spleen through the common absorbents of the stomach, which lead to the thoracic duct.

That when the pylorus is open, the colouring matter under the circumstances above mentioned is equally detected in the spleen.

That when the spleen is in this state, the blood in the splenic vein has its serum more strongly impregnated with the colouring matter, than that of the blood in the other veins of the body; and when the stomach is kept without liquids, although colouring matter is carried into the system from the intestinal canal by the ordinary channels, no particular evidence of it is met with in the spleen or its veins.

That the cæcum and the portion of the colon immediately beyond it, is found (in the ass) to be at all times filled with liquids, even when none has been received into the stomach for several days, and there is a greater number of absorbent vessels for carrying liquids from the colon into the thoracic duct, than from any other part of the body. The colon is therefore a reservoir, from which the blood vessels are occasionally supplied with liquids.

Mr. SEWELL informs me, that the same observation applies in a still greater degree to the horse.

That coloured liquids taken into the human stomach, under some circumstances, begin to pass off by urine in seventeen minutes, continue to do so for some hours, and then disappear; they are again met with in the urine, after the colouring matter is known to have arrived at the great intestines, by its passing off by the bowels.

From the above facts, the following conclusions may be drawn.

That the liquids received into the stomach beyond what are employed for digestion, are not wholly carried out of it by the common absorbents of the stomach, or the canal of the intestines, but are partly conveyed through the medium of the spleen into the circulation of the liver.

The vessels which communicate between the stomach and the spleen have not been discovered; but if it is proved that the colouring matter of the contents of the stomach, is met with in greater quantity in the spleen and in the vein which goes from that organ to the liver, than in the other veins of the body, there appears to be no other mode in which it can arrive there, but by means of such vessels; and the two different states of the spleen, which

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which correspond with the quantities of liquids that pass from the stomach, are strongly in favour of the existence of such a channel.

This communication between the cardiac portion of the stomach, and the spleen, will explain the circumstance of those who are in the habit of drinking spirituous liquors having the spleen and liver so frequently diseased, and the diseases of both organs being of the same kind.

This organ is not essential to life, its office being of a secondary kind; but when it is materially diseased, or entirely removed, digestion must be disturbed. The extent to which this takes place, cannot be accurately known from experiments on quadrupeds, and the instances in which the human spleen has been removed have not been attended to with sufficient accuracy to afford an explanation of the effects that were produced on the stomach.

A CASE *of very singular* NERVOUS AFFECTION, *supposed to have been occasioned by the* BITE *of a* TARANTULA. *By Dr.* JOSEPH COMSTOCK, *of South-Kingston, America, (R. I.)*

IN the month of December, 1801, Nancy Hazard, aged 15 years, whose parents lived in North-Kingston, was on a visit upon the Island of Conanicut. The weather in that month being remarkably warm, she went, in company with another young woman, to a stack, to procure some oat-straw to make some female attire for the head. While stooping down and culling the straws which lay on the ground, a large black spider, which she said she observed had very shining black eyes, ran on the back part of her hand, and, without her attempting to molest him, having heard, as she said, that it was good luck, soon ran off. She said it gave her a slight sensation, whilst on the back of her hand, like the prick of a pin, upon a particular part which she pointed out. The same afternoon she felt the hand and arm of that side to twitch involuntarily several times, and that night was taken with a pain in the same, which, shifted into her stomach, and increased till the morning of the third day afterwards, when she went into fits.

If I recollect, she puked several times upon the second and third days.

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A physician was called; but she not having mentioned the spider, and her complaints resembling hysteria, were treated as such by him. This information I received from her and the family. The medicines which he gave, they did not know; she was bled, however.

She not growing any better, Dr. Perry, then my co-partner in medical business, was called. From him I learned that in her case he discovered something very peculiar, and was led to consider it a case *sui generis*.

He observed that her fits resembled, in some measure, hysteria, but more nearly hysteric paroxysms combined with the St. Vitus's dance.

After premising a gentle cathartic, he gave her the tinct. castor, spt. C. C. and an opiate at night. By these it was thought some relief was afforded; but the fits returned the next day, and were very obstinate and distressing.

Being at the distance of twelve miles from her, he did not visit her again till five or six days afterwards. Her situation was not essentially altered: the fits continued to afflict her the greater or less part of every day. They were not accompanied with fever. To the former remedies he joined the oleum succini, with orders to increase the dose of the opiate.

The Doctor, after this visit, first mentioned to me an extraodinary increase of sensibility, which he observed in her feeling, and which constituted, afterwards, a prominent and very striking feature in her complaint.

There had no mention been made by her, as yet, respecting the spider; but that she had an inclination for music was judged by her movements with her hands and fingers, when in her fits, as if after a tune: and when music was introduced, her motions corresponded; she beating with her hands and finger ends upon her breast, in imitation of dancing. And sometimes, when, from the violence of the spasms, she could not regulate her motions, and would strike too hard, it was common for some of the attendants to place their hand upon that part of the thorax where the ends of her fingers struck, to prevent the harm. She appeared best pleased when her father's hand was placed for this purpose; and if another person ever so gently endeavoured to displace his hand, and put his own in its place, she would immediately push away the strange hand, and seek for her father's! This she did, although to every thing else insensible, and with her eyes closed.

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This was not done by taking the different hands into her own, and discriminating them by their magnitude, softness or hardness; for this the violence of the spasm, with which she was universally affected, rendered her incapable of doing; but simply by touching with her finger ends, as the Doctor experienced in himself. The violence and long continuance of the paroxysms having induced debility, some tonic remedies were added to the above; after which she was removed home, appearing somewhat better, or having only, perhaps, a longer interval of ease.

The disorder, however, soon returned with increased violence; and the medicines, after repeated trials, and increased doses, not appearing to have any effect, were at length discontinued, from a conviction of both physicians and friends that they were of no utility. Music now became the substitute for medicine, and was absolutely necessary, it being the only thing which moderated the violent and distressing spasms with which she was the greatest part of the time afflicted.

It was the fortieth day of her illness when I first visited her. When I went into the room she was sitting in a chair, leaning her head upon one of her friends, and following, with motions of her hands, a tune sung by some young woman who appeared to attend for that purpose. The tune she followed with the greatest regularity and exactness. If it changed for an air more quick or slow, her motions exactly corresponded; if it stopped, her motion immediately ceased. Yet to all other sounds did she appear as insensible as matter inanimate.

Her muscles were continually affected with spasm during the paroxysms. Before the music began, or if it ceased, the spasms were very violent and excruciating, affecting her muscles with convulsive motions. When the music commenced, it in a great degree relaxed the spasmodic tension, and the convulsive motions were changed for the motion of her hands in following the tune. The tension remained, however, in her fingers, which, all the time of the fit, were drawn apart as far as possible, and rendered stiff as sticks. She did not now, as she did afterwards, dance upon her feet.

After remaining in this situation about an hour the fit began to abate. She was now able to regulate the motions of her hands, and to speak, though indistinctly.

She was in this situation when I was desired to approach her, that I might witness something still more extraordinary

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nary than a disorder for which music was the only remedy yet found out.

Her eyes had not been open since I came into the room; and, to my surprise, without opening them, and by feeling only, she accurately told the colour of the different garments I had on!

This faculty she possessed in such an eminent degree as to be able to point out different colours upon one piece of cloth, cotton, linen or woollen, and to be able to discover different kinds of materials when wove into one piece, as woollen, silk and cotton. More exquisite still was this sensation: After feeling my hand some minutes with great attention, she would afterwards tell what things received from my hand belonged to me. This cost her more time and study than the other; and I observed that, in order to determine this, she put those substances on her cheek, as she had done my hand before them.

Did holding a substance in one's hand make a slight alteration in its surface, which her extreme sensibility of feeling could discover? And having before felt that hand, could she perceive the similarity? I was led so to conclude, or to leave the phenomena unaccounted for.

I was strengthened in this opinion by what further happened. I held a piece of money some time in my own hand, and then gave it to another person to hand to her. This appeared to puzzle her very much; and after feeling of it for some time with great attention, she accidentally let it drop, and then said she believed that it belonged to the person who passed it from me to her; but upon its being put into her hand again, she put it to her cheek, and determined that it was mine. Perhaps it will be said that by my own reasoning she ought to have adjudged it to the person who last held it: but I must remark that I held the piece longer than the other person, who, as he passed it from me to her, only slightly touched it. If, therefore, holding it in one's hand altered the surface in a slight degree, it was probably altered most by my hand. Her putting it on her cheek was probably owing to the sense of feeling being more acute there than in her fingers, she having been accustomed to use her fingers when in health. I have observed persons to do the same when they wished to perceive a slight degree of warmth in any body, or the smoothness or softness of any material.

I should not relate things so much surpassing common credibility as those I have related, and am hereafter, in this account, to relate, let my senses confirm them ever

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so unequivocally, out of sight of credible witnesses. But these, and the other circumstances which I shall mention, were all observed in open day, and in the presence of persons whose testimony is not to be doubted.

All this time she was partly in a fit. She soon after came entirely out of it; was rational as when in health; and all this magic sensibility vanished; she remembering nothing of what had happened during the paroxysm.

I was now led to consider her disorder a real *tarantismus;* and upon inquiry, she related the history of the spider, and the affection of her arm the same day, as above related. The partiality which she had formerly shown, when in her fits, for her father, had now begun to abate, and even to be changed to an aversion: but she still evinced a peculiar regard for her relations more remote, as cousins, &c.

Upon the back of the hand of one of those she chose to play with her fingers in following the music; and I now made the same experiment which Dr. Perry had done early in her illness. I put my hand, at the instant that both her's were lifted up, in the place of her relation's. The consequence was as before: immediately upon the ends of her fingers touching it, she endeavoured to remove it, and felt for the other!

I did not see her again until the twelfth week from the commencement of her illness, but received frequent intelligence from her. Her fits returned at unequal periods during that time. Sometimes these intervals were protracted two or three days, in which she enjoyed good health, which was usually the case in the absence of the fits; some irregularity of the menstrua only excepted.

The reports spread about the country of her strange illness, and surprising faculty of distinguishing colours by the touch, which some vulgarly attributed to witchcraft, drew together a great many people to see her. The throng of spectators, and the extreme attention she was obliged to make use of in order to distinguish colours, appearing to fatigue her, her parents were advised to prevent her being put upon the trial, which was accordingly done. I did not now put her upon any trial of this kind; but the sensation appeared to continue as acute as ever; for she readily distinguished her relations by the touch; to all of whom she now manifested as great an aversion as she had before shown fondness. None of them were able to touch her, when in her fits, without aggravating every symptom, and bringing on the most violent spasms. And it was even

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said she could ill bear the room in which her father was, and could tell if he was in the room, though ever so dark, by the effect it had upon her disorder.

The salutary effect of music still continued; and she now danced upon her feet with as much accuracy as she had before shown in following the tune with her hands. Her propensity for this was discovered by her movements with her feet as she lay on the bed.

It was in the fore part of the day when I called to see her. She lay in a motionless state upon the bed, every nerve and muscle being contracted. In this situation she had been from the early part of the preceding evening; not having spoken, nor taken any notice of the music, which was now made by an excellent performer on the violin, singing having before this time lost its influence upon her. It was only of music of this kind that she would take any notice.

He had, in vain, tried to rouse her during the night. I desired him to make a further trial, by putting the instrument near her ear, and playing a brisk air. This had the desired effect. I soon observed her fingers, and then her eye-lids, to relax. As she opened her eyes I discovered nothing but the white; the whole cornea, or coloured part, was turned over upwards into the socket, by the violence of the spasm upon the muscles of those parts.

She then began to follow the tune with her fingers, and shortly after came out of the fit, got up, walked about, and adjusted her dress. We remained out of the room a few minutes; when we went in she had thrown herself upon the bed, and was in the same motionless, contracted state, as when I first came in.

She remained thus until the violin was brought. After the music began, she made motions first with her hands and then with her feet. This was the signal for helping her up. A young man, not one of the family, but a distant relation, happening that instant to enter, attempted to assist her, but the moment he touched her she shrunk back with a seeming horror, although her eyes were closed, and would have gone into violent convulsions, if he had not desisted, by desire of the musician. I not being related, helped her on her feet. She soon commenced dancing, in which exercise she remained near an hour and a half, with very little intermission. She danced with all her might, jumping a considerable distance from the floor, and continued the exercise so long that, being entirely exhausted, she would fall without attempting to prevent it, like a log upon

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the floor. After panting with great emotion a few seconds, she would resume the exercise.

After having kept her dancing till she refused the exercise any longer, she was again laid on the bed, and fell into the same state of stupor as before.

Whilst dancing, her eyes all the time were closed, which appeared to proceed from the violence of the spasms; as to me, indeed, did all her motions. The conjecture may be too bold, but I will venture to suggest it,—that those spasmodic affections which were so violent were brought into a system of regularity by the power of music upon the auditory nerves, and sympathetically communicated from them to the other nerves of the body; and thus was her whole dancing spasmodic and involuntary.

One circumstance, among others, which corroborates this opinion, is, that in a very violent paroxysm, when the music would for some time lose its effect, and her spasms were so excessive, that her friends were apprehensive they would prove fatal, when first the music would make an impression, it would cause the motions of her body, in dancing, to be as extravagant as the spasms had been violent.

No one would pretend that the spasms which preceded her dancing, and into which she would fall in case the music ceased, were dependant upon the will. And it appeared very evident that her dancing, was nothing more nor less than a modification of those spasms, one terminating in the other, and *vice versa*.

When I left her, I recommended to her friends to keep her dancing as long as possible when she once began, and to trust to it as a principal remedy. It was my opinion that nature in this way pointed out relief.

I was afterwards informed that this advice was followed, and it was attended with this effect: it protracted the space between her fits to a longer period than ever before it had been. When they returned they were as severe as ever, though the interval was lengthened from days to weeks.

The next time I saw her I observed a surprising acuteness in her olfactory nerves. She had manifested a partiality for the smell of certain odoriferous substances. Essence of lemons was one of those she liked best. She was in a partial paroxysm when a vial of it was introduced, and held towards her. She drew in the scent by an incessant and convulsive kind of snuffing. It was afterwards carried out of the room, and she, with her eyes shut, directed her head toward the passage the person went

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went out at, still snuffing. Before it was carried out, the musician rubbed the end of his finger around the mouth of the vial. He did not turn it up, and there was not the least particle of the essence, in a fluid state, upon that part. There was the remains of the oil, having a yellowish appearance, the thin part being entirely exhaled.

After the vial was removed, he put his finger under the bed on which she was lying, about half way between it and the floor. She instantly turned over on her face, applying it to the bed, that she might be able to inhale the beloved odour in a right line, which she did with the greatest eagerness. As she emerged still more from the fit, so as to open her eyes, she discovered a partiality for certain colours, and an aversion to others. Green and red were among the former; white and black, and their mixtures, among the latter. If the agreeable colour was presented, and moved or shook in her sight, it appeared to produce the greatest pleasure, which she evinced by a convulsive kind of laughter, very hearty, yet not natural. If white or black was presented, she would turn away her head with a marked aversion and seeming horror. The sight of any thing transparent, and water slowly poured from one vessel into another, produced the same effect as her favourite colours.

After this visit I frequently called to see her, as my professional avocations led me into her neighbourhood.

Every new paroxysm was attended with some variation; but the most striking phenomena were a repetition of what I have already related: the others were referable to the same cause in a less degree, that is, *increased sensibility.*

She continued to have her fits return at irregular periods, sometimes with intervals of four or five weeks, until the month of August, 1802. She was then seized, whilst from home, with a pain in that hand upon which the spider had crawled the December before; and the spot where she said the spider had bitten her soon became red. The pain increased for two or three days, when a spot, as large, or a little larger than half a dollar, began to turn black, and threatened gangrene. Dr. Perry, who happened to be in her neighbourhood at this time, called to see her, and ordered the cortex ruber in substance. By the use of this, and some simple topical applications, the mortified part cast off, leaving a spot of an irregular shape, very much resembling a burn.

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During the soreness of her hand she was again seized with fits, but they were not so violent as formerly.

When I saw her, which was, I think, on the fourteenth of the month, she lay in a state of stupor similar to that I mentioned above.

The people about her remarked that her hearing was very acute, and that she had been known to understand the conversation of persons in a whisper, though in another room. I did not witness any instance of this; but the lady who mentioned it to me, related it from her own knowledge, and is of the first respectability, and unquestionable veracity. The young woman was then at her house, and from other instances of the extreme sensibility of her nerves, which I witnessed myself, and the aptitude I observed in that sensibility to change from one set of organs to another, I make no doubt of the fact.

Her hand, soon after this period, began to discharge a very unusual kind of matter. It was as green, and almost as thick as inspissated beef gall. This matter was discharged in such quantities, for two or three weeks, as to require the sore to be dressed three times a day; and although several folds of linen were laid over the dressings, they would be soaked through before the next dressing, and a large quantity of matter collected on her hand. The fits abated when the discharge began, and she has since had no return of them, and nearly five months have now elapsed. The discharge gradually lessened, and the sore healed. Once during this period the discharge suddenly stopped, upon which she grew very unwell, and was threatened with fits, but upon its re-appearing she grew better.

She is a girl of good habit of body, never having been subject to any particular disease, and, in general, very healthy.

Her temperament I should place in the *sanguineo-choleric.*

It was observed by the family, that during the discharge from her hand, the arm of that side was considerably diminished in size.

I never observed her complaints accompanied with any pyrexia, nor was her flesh, during her illness, diminished in any considerable degree.

I once saw her in a partial paroxysm, when she appeared very sick at her stomach, and kept continually retching. I ordered some warm water to be given her, but she did not puke it up; and what she evacuated did not appear to come

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come from her stomach. It was a mucous matter, appearing to come from the mucous follicles about the fauces, and I conclude, an increased secretion of that fluid, as she evacuated considerable quantities of it. It was thus that she threw up pins and needles, which, in the agony attending her fits, she would, I conceive, unwittingly put in her mouth, and in this way get rid of them; which gave rise to a vulgar report, that she swallowed those substances and then puked them up.

A case so replete with the wonderful is not, perhaps, easily to be found in the annals of medicine; and it is to be wished that a more accurate account had been kept of it. But from the length of time she was sick, and from the circumstance of no one physician attending her constantly, and a great part of the time none at all, this was impracticable.

I have endeavoured to collect the leading and most prominent symptoms, and rather to lessen than exaggerate those which partook so much of the marvellous.

In relating thus much, I may, perhaps, be charged with presumption by some; but I have no fear of this from those who will take the trouble to inquire into the numbers and credibility of those who witnessed every part of my narrative.

Respecting the insect which I have supposed to be the cause, it seems natural to make some remarks. It may be objected that the tarantula (phalangium apulianum) is not an inhabitant of our climate. And this objection, so far as I know, is well founded; that being a name given to a particular species of spider in Italy. But I think we have a spider in this country, whose economy is somewhat similar to the description given of that; and, if it be not the same species, may be equally poisonous. I will not contend about names. That she was poisoned by a spider, considering every circumstance, will seem hard to deny. She was heard to say, by a person near her, at the time she was at the stack, "O, what a great spider there is!" And then the first complaint being in that arm, and ending in the same, and a sore of an unusual kind appearing in the very spot where she all along had said the spider had bitten her, are strong proofs of her having been bitten; not to mention that such a strange illness would naturally lead us to look for an unusual cause. In some of the symptoms we observe a similarity to those occasioned by the Italian spider, but here we cannot trace a parallel clearly through.

The spider of Italy produces a disorder, which, as their

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physicians say, is cured by music. Here the parallel fails. In this case the patient was evidently cured by a spontaneous discharge of matter at the very spot where we supposed the poison first entered the blood. In respect to those remarkable effects, the consequense of increased sensibility, we have no parallel that I know of. In respect to the partiality for, and antipathy to certain colours, the parallel is exact in the two countries. In respect to music being the cause of the patient's dancing, and also in its affording relief to the complaint, there is an exact similarity between this case and those described by the Italians. In respect to the partiality shown for her kindred at one time, and the remarkable aversion evinced at another, I know of no parallel.

The lateness of the season in which I have supposed the spider to have appeared has not been offered as any objection to its appearance; nor will that be adduced by any one who recollects the extreme mildness of the fall months, and the month of December that year. It was observed to me by the father of the young woman, that the warmth of the day, on which his daughter went to the stack was such, that she and another young woman took off their outside garments, and sat in the door to work. It may be proper to remark, that when I first saw her I could perceive no mark upon the spot where she supposed the spider had bitten her. This was, however, as late as the fortieth day; and if it had been earlier examined, it is not very probable that any very perceptible mark from an insect which inflicts a wound in the manner of the tarantula could have been discerned; it not being by biting, but by pricking with a very fine pair of horns or forceps, and, at the same instant, spitting from its mouth the poisonous fluid upon the wound: therefore it cannot appear strange that the puncture should be scarcely, if at all, visible at first.

I consider the remarkable increase of sensibility as constituting a part of the disease; she never showing any signs of it when she was entirely out of her fits.

Perhaps this case may furnish us with some new light relative to the treatment of nervous diseases. If my theory be right, may we not expect much benefit from music in hysteria?

I have had one case only in which I had an opportunity of trying it: it was an obstinate hysteric one. It was attended with the advantage I expected. It moderated the spasms, reduced them to order, and shortened the paroxysm.

January 24, 1803.

To

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AMONG the many accidental causes, tending to abridge the period of human existence, perhaps none are of more frequent occurrence than that arising from the sudden immersion in water, or drowning as it is termed, whereby life either becomes suspended or totally destroyed. When it is considered of how much national importance is the consideration of this subject to the inhabitants of a commercial state, whose welfare and security so much depend upon maritime superiority, it surely will not be thought presuming in me to offer a few observations upon the mode of treating persons in this situation. Thanks to the laudable zeal of a Society, so justly called the Humane, and to that individual, (Dr. Hawes) through whose philanthropic exertions so many valuable lives have been restored to their friends and to the community, little is left for me to remark upon the resusitative process; neither should I have troubled you with this article, had it not been with a view more strictly to enforce the doctrine inculcated by that excellent Institution.

In relating one or two practical facts, which occurred within the sphere of my own observation during the time I resided at Wapping; a situation which, from its local connection to the water, together with the extensive practice in which the gentleman with whom I then resided was engaged, offered frequent opportunities of attending to cases of this nature in the absence of the gentleman above alluded to. On Nov. 23, 1807, I had occasion to attend Thomas Harris, ætat. 40, of middle stature, and rather a plethoric habit; he was employed by the London Dock Company in the capacity of a watchman. In going his nocturnal rounds, being somewhat inebriated, he slipped his foot, and was precipitated into the water, where he remained upwards of twenty minutes ere he could be rescued from his perilous situation. When I saw him he presented to the view a lifeless body, having no signs of animation whatever; his physiognomy was bloated, and somewhat discoloured. I immediately proceeded to put in practice the means recommended by the Royal Humane Society, viz. Stripping the body and rubbing it dry with warm flannels, placing it in a room heated by a good fire, inflating the lungs, applying hot bricks to the soles of the feet,

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feet, &c. &c. These means were persisted in for upwards of an hour, without effect. It then occurred to me, that the warm bath, at a temperature of blood heat, would be the most likely mode of restoring him, as a more uniform and diffusible heat can be applied by this means than any other. The effect fully justified my expectation, for the man had not remained more than ten minutes in the bath before symptoms of returning life were manifested. By keeping up the degree of heat to the same temperature, and by means of fresh supplies of warm water, he was perfectly restored within half an hour. It is here necessary to premise, that when he was so far recovered as to be enabled to swallow, small doses of the volatile alkali were administered, which appeared materially to assist in his recovery. This medicine I have often employed, and with seemingly good effect.

Another Case, of a similar nature, occurred not long after in that of a Portuguese sailor, who fell overboard from a ship then lying in the river Thames, and remained under water nearly ten minutes. He was brought ashore, and I was desired to see him. The good effect which had resulted from the use of the warm bath in the former case determined me to have recourse to it more speedily in this. I therefore ordered one to be prepared as quickly as possible, and in the interval proceeded to put in practice the usual means of resuscitation, but without success. I then had him placed in the bath, at the same degree of temperature as in the former case, and, I am happy to say, with the same good effect.

From the season of the year in which these cases occurred, it should appear that cold contributed not a little to suspend the animal functions, and that the bath was rendered more efficacious in consequence. However that may be, it is a remedy well deserving of attention; and where other means fail, ought, in my opinion, never to be omitted, if practicable.

I am, &c.

WILLIAM GROVE.

St. John Street, Clerkenwell.

To

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WHEN the interests of society and humanity, when the happiness of numerous individuals, and when the cause of truth are at stake, silence would not only ill become, but would even be criminal in any person who feels, or professed, the least degree of affection for his fellow-creatures. Should such a being exist; should he console himself with the selfish idea, that, though the welfare of a world be involved in the question, yet as neither he nor his connections are liable to suffer by it, therefore there is not any necessity for his pleading the cause of veracity; I envy him not his feelings, though he rank ever so high in the scale of intellectual excellence.

Far be it from me, by what I have said above, to reflect upon any one. I hope the gentleman, upon whose communication I propose offering a few remarks, will be the last person to imagine such a thing. I am too well aware of the *delicacy* which *ought to be* observed in animadverting upon the writings of another; and, sorry am I to see, the spirit of *illiberal censure*, often approaching to *indecent scurility*, so widely disseminated among the Contributors to the Medical and Physical Journal. A candid and scientific examination into the opinions of others; an impartial and minute scrutiny of every discovery in medicine or surgery, that is brought before the public, would be of mutual advantage to the disciples of Esculapius, and to those who are destined to derive the benefits resulting from its excellence,—the human race.

In your Journal for July last, No. 113, is contained a case of the purulent ophthalmia, frequently occurring in young children soon after birth, by a Mr. Morrison of Dublin. At the conclusion of the case, are added some observations by the same gentleman, tending to prove that the above disease is produced by the *matter of lues venerea*, applied to the eyes of the child, during its passage through the vagina of the mother. To be decidedly of "opinion" of the proximate cause of a disease, judging merely from a single ambiguous case, is in every point of view certainly erroneous; and, more particularly in one so widely extended as the purulent ophthalmia; when we take into consideration, that the happiness of very many individuals and families may be irretrievably ruined by the assertions

of

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of Mr. Morrison. From his account, it appears the child was affected with very severe symptoms of the disease, two days subsequent to its birth; and these symptoms originated from the application of venereal matter, produced in the vagina of the mother, to the tarsi of the infant. These circumstances are all doubtless correct, with the exception of the matter applied being *venereal*; and Mr. M's attempts to establish this point are extremely vague and unsatisfactory. In the first place, we are informed of nothing more, than that Mrs. N. had a venereal complaint, which had been suspended during the advanced period of utero-gestation. What was this complaint? and what were the symptoms attending it? Had she simple gonorrhœa, or had she lues, evinced by the presence of chancres, or diseased glands? For I coincide in opinion with most of modern surgeons, that the two diseases are perfectly distinct. Why was it "unequivocally", a case of the venereal kind? Did it require to be extirpated from the system by a mercurial course? These questions must be answered before an inquisitive mind can believe the affection was what Mr. Morrison asserts it to have been.

Respecting the method of cure adopted by Mr. M. to relieve the child's complaint, it is nothing more than what would have been eligible in an inflammatory affection of the eyes, proceeding from any other irritating cause; viz. the use of an astringent lotion, and the exhibition of calomel; though Mr. M, reasoning from the similiarity which existed in appearance between the ophthalmia and gonorrhœa, thinks the medicines acted in a specific manner. He promises to mention a "few other facts", in his "*observations,*" to support his opinion; but on examination these dwindle down to one, namely, the experiment made with the matter discharged from the eyes of the infant, as applied to a small wound on the hand of a young man, and this is perfectly inconclusive. I neither wish, nor do I intend to call in question Mr. M's discriminative powers; yet, the single circumstance of the ulcer, produced by this application, taking on the "*appearance*" of the *venereal* sore, is not nearly sufficient to convince the least sceptical reader that it was so, when unaccompanied by any affection of the system, which, from Mr. M's silence on that head, I should imagine was the case. We know that acrimonious matter of an infinite variety of species, when applied to the surface of a wound, will produce a deranged secretion of matter from the mouths of the secerning arteries; and I am convinced this was the case in the above instance;

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instance; and with respect to the healing of the ulcer, during the taking of mercury, this is no proof: foul ulcers are frequently very much benefited by the administration of that medicine, when there is not any venereal taint even supposed to exist in the system; consequently, the ulcer produced in this case might have been induced to cicatrise during the exhibition of that mineral.

Till Mr. M. clears up the obscurities that involve his account of this case, I must still persevere in being of opinion, that the ophthalmia did not arise from any *venereal*, but from some *virulent* matter, applied to the eyes of the infant during its entré into the world.

I shall now beg leave to call Mr. M's attention to a paper published in the Edinburgh Medical and Surgical Journal for April, 1807, page 159, by Mr. Gibson of this town, a gentleman distinguished as a scientific surgeon, and deservedly eminent in his profession. Mr. G. gives it as his opinion, that the purulent ophthalmia is produced by the application of the matter of leucorrhœa to the eyes of the infant; and, after giving a case, mentions, that in the course of his practice, as surgeon to the Infirmary, he had seen during the last year, thirty-five cases, in all of which the mother had been affected with fluor albus during pregnancy. In the same work for April 1808, page 247, is an extract of a letter from Mr. Hill, of Chester, to the Editors, in which he relates a case of the purulent ophthalmia. He is rather of opinion, that it was induced by exposing the child to the heat of a fire immediately subsequent to its birth; but he acknowledges the mother was affected with leucorrhœa.

I have seen, this morning, at the Infirmary, three cases of the disease, patients of Mr. Gibson's; in all of which, the women were unwell with fluor albus, during utero-gestation; and, what decides the case in point, the complaint *existed before marriage.*

I would not wish Mr. M. to infer from any thing contained in this letter, that I am of opinion the matter of gonorrhœa, or venereal sores, *will not* induce a disease similar in appearances to the purulent ophthalmia of new-born children. I am fully aware that it *will*, and frequently *does.* I only contend, that the disease, *strictly so called, is induced by the application of the discharge from leucorrhœa.*

I am, &c.

PHILO.

Manchester Infirmary, August 1, 1808.

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The Question respecting the Effects of Climate in changing the Human Form and Colour; argued from Facts collected at Barbadoes; by Dr. PINCKARD.

IN the part of the island near the tar pits, we happened to call in at a small hut, or cabin, where we met with a large family of Barbadian cottagers; and, with all the inquisitiveness of strangers, we addressed the good people in a multitude of interrogatories, and were highly gratified with their replies. They were living amidst the mountains, apparently shut from the world, and but seldom exposed to the intrusion of strangers. The old dame of the house was nearly seventy years of age. We found her occupied in playful attentions with two of her grand children—two, of seven, of the offspring of her daughter. Making inquiries respecting the old woman's history, we learned that she could trace back her family in regular lineal descent, as far as her great grandfather, the successors of whom have never removed from Barbadoes; so that the children we here saw, were to a certainty as distant as the sixth generation, and probably much more remote, in direct descent, from parents who had always lived in the torrid zone. One of the children was about six—the other eight years old. In fairness of skin, in feature, and in figure, they might have been mistaken for children born in England, or any other temperate climate.

Near Hilloughby hill we met with another cottage family, regularly descended from British parents, of long standing in the island, and having all the features and general appearance of Europeans. The father of this family was sixty years old, and some of his predecessors had lived to upwards of ninety years. We could not trace the pedigree so accurately as in the other family—but this probably was not less ancient, the old man having no knowledge but of his Barbadian predecessors, and not knowing when they first came to the island. The occupation of this family was that of planting a small spot of land with ginger, and raising stock to sell at Bridge-town market. They were poor, like the others, and compelled to labour much in full exposure to the sun. Like the negroes, too, their diet consisted chiefly of vegetables.

At the fort, commanding the entrance of Carlisle bay, are living a man and his wife, both natives of Barbadoes, whose ancestors for generations, beyond all that tradition has traced to them, have resided constantly in the island: sitting

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sitting round the mother we saw five fine children—their offspring, of face and form as fair as the fairest Europeans.

These facts stand in direct opposition to the speculative doctrines of those who derive the various colours of the human race from climate or locality of residence, together with the concomitant circumstances of diet, and mode of life. Consistent with such opinion it follows, that the offspring of Europeans, living constantly in the torrid zone, and, more particularly, if using the same diet, and exposed to similar habits and occupations, must degenerate, and, in future ages, become negroes.

The three families above-mentioned are, undoubtedly, of the fifth or sixth, or perhaps, a still more distant generation, in direct lineal descent, from parents, originally, English; but whose offspring, through every race, to the present children, have always resided between the tropics. They have moreover, lived in circumstances of mediocrity, exposed to labour, and to the full influence of climate; or have known only the abode of poverty, and by needy fortune have been compelled to use a diet very similar to that of the Africans. Yet is there not an individual among them, who, either in form, feature, or colour, has made even the slightest approach to that change, which a constant residence, through so many generations, must have effected, were their descendants, of future ages, to become of negroe form and hue.

Allowing this change of our species to be as slow and gradual as the warmest advocate of the doctrine might suppose, it were impossible for the mind to conceive a period, when the offspring of Europeans would be broiled into perfect negroes, if no sort of commencement—no mark whatever of deviation—nor any approach to the conversion, could be traced, either in the features, or the skin, of those of the fifth, or sixth, or perhaps of the eighth or ninth generation; after a residence, too, in the successive races, of nearly two hundred years under a tropical sun, and being exposed to most of the other causes, said to promote the expected revolution of their frames!

Children born in England have not fairer skins, nor features more correctly European. The younger have all the cherub face and form of the lovely smiling babes of a temperate climate. Those more advanced are thinner, and bear about them more of that languor, which universally results from long residence in great and constant heat; but still have they no kind of approach to the thickened lip—

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the large mouth—the projecting countenance—the flattened nose—the lengthened head—the wooly hair—or the dark skin of the negroes.

The opinions of the gentlemen of the island seem to be all against the idea of such a conversion of the human body; and we are assured that multitudes of families, in addition to those we have seen, now live in Barbadoes, who in progressive descent, through successive generations, for nearly two hundred years, have resided in the island, without the slightest change being perceptible in their offspring of the present day.

To whatever age the parents may have lived, it is remarkable that, although the face and hands shall have become brown, from immediate exposure to the sun, the other parts of their bodies remain white and unchanged; and not the softest shade—not the slightest tinge of the acquired darkness of hands or face is communicated to the descendants—the children being, invariably, born as perfect whites as those of Europe. If, therefore, it could, for a moment, be admitted that merely the tanned countenance were an approach to the negro state, this being completely extinguished in each succeeding race, it could never advance beyond the feeble change effected in a single generation.

But the very strong and incontrovertible fact with respect to the American Indians, militates so decidedly against this doctrine of conversion, that scarcely another argument can be necessary to its refutation. Although living for unknown ages under the same parallel of latitude as the Africans, and exposed to precisely similar habits and occupations, not an individual of them has ever been known to turn negro, either in skin or feature. Nor, indeed, would it be less reasonable to expect that the negroes of Africa, or those of the West India islands, should change to Indians, than that Indians, or Europeans, should be converted into Africans!

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ALTHOUGH Mr. John Bell's splendid quarto volumes have not yet come under the revision of the Reviewers, I think it right that the public, should, in some way or other, be informed that his last volume on tumours, is published,

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lished, *at present*, in a very incorrect and incomplete manner. So much so, that, with an apology, or without an apology, I never before heard of a work, offered to sale as perfect, abound with so much omission or so many instances of carelessness. This last volume, as the preceding ones, contains numerous plates, which are so connected with the descriptions, that correct references to them are essentially necessary to the perspicuity of the work. But whilst we are reading the description of one plate, we find nothing but references to another. From page 123 to page 174, scarcely a single reference can be found correct. The consequence is, that the reader is interrupted ten or twenty times in every page, by references to plates; and after much time and trouble, he has the mortification to find that some references correspond equally well with half a dozen plates, and others with none at all.

The plates too are numbered after so capricious a manner, that it cannot be known how *many are missing*. The first four plates are not numbered, the fifth is numbered 40. The following plates however are clearly omitted.

1st. Page 112, "the drawing No. 6, of the Ethmoid Bone of a poor woman who perished of this disease" [Polypus.]

2d. Page 114, "the drawing of the little boy, plate 4."

3d. Page 174, "the drawings No. 4 and 5?"

4th. Sketch of Mr. Taylor's, No. 2.

5th. The Sketches of instruments referred to in page 123, and in many parts of the work; but it is impossible to form any idea of the form of the instruments without the sketches, as will appear by one or two quotations, "You will do better to use a knife of the form represented No. 11." Those fashioned like No. 12 and 13, which I have hitherto used." I am conscious that I could manage the form No. 14," &c. &c.

Now, Gentlemen, I apprehend that it is not exactly fair, that imperfect works should be exposed to sale as perfect, at uncommon high prices. I therefore think that the failings in the costly volume above-mentioned, are of that nature as to be a just subject of public complaint. Some notice of the grievance is assuredly called for, if any reparation is to be expected; for the Bells are in the *habit* of leaving their works imperfect. In the second volume of the Anatomy, (chapter the 5th), "on the Structure and Action of the Arteries," is omitted, and has not appeared in any subsequent volume. In the System of Dissections (which work, by the bye, closed very abruptly) a reference is made to a fifth additional plate, and yet only one additional plate was published.

I am, &c. B. G.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

TRUSTING that the purport of your publication is to cherish every attempt that may tend in the least to the improvement and consequent advancement of medicine, I have ventured to solicit the insertion of the following observations, subjoined with a case; and though my experience may not entitle my sentiments to that respect and attention, that older disciples of Galen deservedly merit, yet it is hoped that my sincere wishes for the improvement of the art may tend to palliate my defects, and shield me from criticism. The subject on which I wish to offer some remarks, is the treatment of Pneumonia, a disease of some importance, and to which the inhabitants of this varying clime are extremely subject, owing most probably to the unsettled state of the atmosphere. I pretend to no new discovery, nor any novel application of an established remedy, I only wish to recommend to the notice of others, (who are more competent judges than myself,) a practice of which I have seen the beneficial effects repeatedly in this acute disease. The remote causes of pneumonia, in my opinion, are either cold applied to the body obstructing perspiration, and determining to the lungs, or else injury to the pneumonic organs from some external cause, viz. violent blows, strains, or any such violence as may produce inflammation; and these circumstances more particularly affect those persons of an inflammatory habit, and of a robust and vigorous constitution. But from whatever cause it may proceed, we may safely judge of the disease from concomitant symptoms, such as pyrexia, cough, dyspnœa, pain in some part of the thorax, increased frequency of pulse, &c. all which characterise the disease, so that it is almost impossible to be mistaken; but as the treatment of the disease, and not the definition of it, is the principal object I have in view, I shall enlarge no further in this particular, but advert to the treatment of the disorder. The principal remedy generally depended upon, has been the free, and, in some instances, almost unlimited use of the lancet. The reason for which I hope is better known to those who are greater friends to venesection in this disease, than I am at present. I can see no necessity for bleeding, except under certain circumstances; it undoubtedly may be of essential service in the commencement

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mencement of the complaint, when expectoration has not commenced, and the strength of the patient is not diminished by the attack; here you may, by the use of the lancet, remove inflammation, and perhaps stop the progress of the disease, before the symptoms of danger appear; likewise in robust and athletic constitutions, where the vis vitæ is undiminished and the circulation of blood rapid; in both these instances venesection stands pre-eminent over every other active remedy. It is a notorious fact, that pneumonia more commonly terminates in expectoration than not. Now, it has been alleged by some experienced practitioners, that you are not to neglect bleeding even after the fourth day, and that expectoration is not in the least to supersede it. Is this consonant with reason or experience? When expectoration has once commenced, will not bleeding copiously at the arm, and persisting in it till it almost produces syncope, as some writers have advised, tend to stop that expectoration, which nature has formed to carry off the disease, and materially weaken the vital energies of the constitution, and rob it of that support it necessarily requires, to bear up against the disease? Blisters I have witnessed of essential service in this malady; the modus operandi of which I cannot attempt to explain exactly, but I think they tend to lessen inflammation, and assist nature in an eminent degree; and if they were more generally adopted, their utility would consequently be more generally known; but I am confident of this, that in four cases out of five there is no necessity at all for bleeding, and that the majority of sufferers in this complaint would be more likely to recover, were the lancet less freely used. Perhaps the relation of the following short case may tend to illustrate the preceding remarks. A man, about 30, came to me for relief, attacked with this disorder in a most violent degree; respiration dreadfully laborious, so much so, that he almost felt the sense of suffocation, (with expectoration of yellow mucus) pulse 110; acute pain in the thorax, with heat and fever, &c. The man was not in good circumstances, and had delayed obtaining medical assistance for two days or more, which tended in some measure to aggravate the disorder. I immediately ordered him a *large blister*, to be applied to the chest, and an expectorating mixture with g. ammon and squills, &c. In the evening he was much better; could respire easier; the pain in the thorax not so great; pulse still high, though much abated; could only lay on his back, and now felt acute pain in the left side, for which I ordered

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him another *large blister*, to be placed on the part in pain. Next day he was considerably better in every respect, but extremely low and feverish. He drank the decoct. hordei. compt. constantly for common drink, and I made the camphor julep the menstruum of his expectorating mixture. He followed up this plan for two or three days longer, till there was no symptom of inflammation left; I now gave him tonics, and he took gentle exercise, and in about ten days the man went about his usual employment. I shall now leave the preceding observations, and single case, out of many others, in which I have been witness of the beneficial effects of blisters, to the perusal of your intelligent readers, and shall feel myself obliged to them if I have advanced any thing that is palpably erroneous, to set me right, and close with one remark, that I think if I had bled in the above case till urgent symptoms had disappeared, in his state of debility and weakness, I should soon have brought him to his last home.

VERITAS.

Observations on Chronic and Acute Rheumatism; *By* Mr. B. Carter.

THIS disease, by the long and severe pains accompanying it, has much afflicted mankind, and frequently brought disgrace upon physicians. Its obstinacy, the difficulty of investigating its cause, and pointing out the indications of cure, render it a disease formidable in the annals of medicine.

Various have been the opinions of physicians on this disorder. We shall not undertake to give a history of the controversies on this subject, but shall briefly deliver what appears to be the most rational, towards defining and curing the disorder.

The rheumatism is by most authors divided into two species, the acute and chronical. The acute usually attacks the young and robust, and is always attended more or less with a phlogistic diathesis of the system. The chronical attacks the old, who have been formerly subject to the acute species. Dr. Cullen observes, that the limits between the acute and chronical rheumatism are not always exactly marked.

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Though the acute rheumatism nearly resembles the gout, yet in some respects it differs from it. It does not usually come on so suddenly as a fit of the gout, but for the most part gives the patient warning by a slow and gradual increase of pain. Neither is it fixed to one place, like the gout, but is distinguished by its frequent wanderings from place to place, accompanied with a sense of numbness. It seldom attacks the small joints, but is confined chiefly to the larger, the knees, hips, and shoulders. The acute rheumatism is generally attended with a continual fever, whereas the gout has periodical remissions. Like most of the pyrexia, it is preceded by a chilly fit, and a sense of cold. A febrile pulse, quick and hard, supervenes. The veins near the part affected swell, and a throbbing is felt in the arteries. By degrees the pain increases, and the patient suffers cruel tortures, which are increased upon the least motion. The sense of pain resembles that of a slow dilaceration of the parts, and commonly goes off by a swelling of the joints.

This disease is not wholly confined to the joints, it sometimes affects the limbs and other parts. It makes its attacks commonly in the spring and autumn, but is not confined to any season of the year. An exacerbation of all the symptoms takes place at night, when the patient is warm in bed. It most frequently attacks those whose employments subject them to alternations of heat and cold. A popular physician remarks, that the most difficult case of the rheumatism he ever met with, was that of a man whose employment was one half of the day in water, and the other half by the fire. It may be observed, that an attack of the rheumatism renders a person more liable to another, especially as Sydenham observes, if the first case has not been well treated. It attacks males more frequently than females.

The chronical rheumatism is much more frequently met with in practice than the acute; it is a disorder almost peculiar to the old and infirm, and is felt by them at irregular periods. This disease is rarely attended with mortality, but from its grievous symptoms, its frequent tendency to return and its troublesome pains, an effectual and permanent cure is much to be desired. But first let us endeavour to investigate its cause, before we attempt to point out the curative indication.

Concerning the cause of this disease, there have been many opinions, but we shall not attempt to give a history of the disputes of physicians on this subject. The late im-

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provements in medicine teach us not to put implicit confidence in any name, how great soever. By this means is the knowledge of medicine to be advanced. What Dr. Cullen has written concerning the cause, appears to be unsatisfactory, though great praise is due to that gentleman for his accurate diagnostics. The causes of the rheumatism are undoubtedly debilitating. These are cold, and others, which when applied to the body, increase the excitability and diminish the excitement. The blood is not duly propelled to the extremities, it stagnates and degenerates into an acrid state, which exasperates the nerves and tendons, and produces pain, inflammation, and swelling.

Alternations of heat and cold appear evidently to be the proximate cause of the rheumatism. The rationale is thus explained. When the body is acted upon by any great stimulus, the sudden abstraction of it is attended with dangerous consequences. Thus the excitability being acted upon by the stimulus of heat, in a considerable degree, produces an accelerated motion in the fluids, and rouses up action in vessels which were before torpid. Now cold, which is an abstraction of stimulus, being suddenly applied, must arrest and detain a quantity of fluids in the vessels. By the application of cold, the action of the heart and arteries is weakened, the humours which are arrested in the extreme small vessels have a tendency to putrefaction, the juices become acrid and irritate the parts, whence proceed the inflammation, pain, and other symptoms of the rheumatism.

The reason why this disorder so frequently manifests itself in the bones and hard parts is, that the fluids find a greater resistance in the hard than in the soft parts, on account of the lesser diameters of their vessels, and hence are more liable to be obstructed. The reason why it affects principally the joints is, that in them, an equal number of vessels is contained in a smaller compass; hence the vessels themselves must be of smaller diameters in the joints than in the muscular parts, consequently there is a greater resistance made to the fluids propelled into them, and the impulse of the fluids causes a gradual dilaceration in their hard parts, and a consequent pain. To this may be added, that the joints are less covered with the cellular integument than any other part, whence they suffer most from the cold, as is evident in the knees. By this their excitement is diminished, and consequently a greater excitability takes place

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place, which renders them more liable to be affected by external causes.

Some physicians deny that an acrid matter can be the cause of rheumatism, and rank this and all others, among disorders of the solid parts. But with respect to the seat of diseases, whether in the fluids or solids, it is not worth while to contend, since the fluids and solids act reciprocally on each other. Some say it is impossible that any other than healthy humours should flow in the vessels. But in an ulcer, gangrene, or sphacelation, we see a manifest tendency of the humours to corruption. Upon the whole, we shall not be far from the truth, if we consider the rheumatism as a disorder of obstructed perspiration.

Having thus in a few words defined a rheumatism, I proceed to show the method of cure. The more accurate our knowledge is of the nature and causes of disease, the more rational will be the practice. It is in vain to expect a specific for this, or any other disorder. Whoever supposes that there is a medicine, an archæus, which, when taken into the stomach, or applied externally, will always certainly and immediately effect a cure; whoever is so unreasonable as to demand this, must expect disappointment. Human abilities are not however so limited, but that physicians can approximate towards a cure. In many cases, the pains never return again, and the disorder is radically cured; and frequently when the enemy cannot be vanquished, his attacks are parried in some degree, and mitigated or avoided by prudence.

In the acute rheumatism, if the patient be young and plethoric, venesection must be performed and repeated while the blood continues sizy. Administer a lenient cathartic every third day, and let the drink be barley water, acidulated with cremor tartar. Nitre is also recommended and the saline draughts. In short, the general treatment of this disorder must be similar to that of an inflammatory fever. Local applications may be varied, but I have found a blister the most efficacious. It should be kept open for some time. Emollient fomentations will sometimes remove a slight paroxysm. The parts may likewise be rubbed with volatile liniment, and leeches and cupping glasses occasionally applied. A free perspiration must be kept up, as on this depends, in a great measure, the cure. With this intention Dr. James's fever powders, or the essence of antimony, may be taken, with the decoct. guaiac. vel sarsaparill. and at night a bolus of camphor and opium.

In the chronical rheumatism venesection may be omit-

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ted, unless the urgency of the case require it. An emetic or a cathartic is sometimes useful to unload the primæ viæ. Gum guiacum has been extolled as an excellent medicine in this disease. The patient should persevere in its use for some time. The essence of antimony may also be given, and the patient should wear flannel next his skin.

Venereal pains are sometimes mistaken for rheumatic. For these, mercury with the nitric acid will be found the most efficacious.

The dysentery and the rheumatism make frequent transitions from one to the other, which induced Dr. Akenside to think, that the matter and cause of both these disorders are the same.

A more generous diet than usual has frequently cured the rheumatism in poor people, after medicines had failed. Upon the whole, whatever tends to mend the habit, to improve the constitution, and to promote perspiration, as a generous diet, cheerfulness, exercise, the use of the flesh-brush, &c. will be found beneficial in the chronical rheumatism.

No. 68, *Hatton Garden,*
August 8, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE notice given on the cover of your Journal, of Vaccine Ichor being supplied, free of expence, by the London Vaccine Institution, continues to keep up unceasing demands for it from all parts of the empire, and from abroad. A London Vulgar has had its confidence much shaken by pamphlets, newspaper paragraphs, and placards stuck about the town; (their authors unworthy the notice of men of science and veracity) but the intelligent part of the public seems every where to have risen above the prejudices produced by these calumniators. Many thousands of charges of matter are distributed by the Society throughout the year; and the very few applicants who may have to complain of not being supplied, have entirely to blame themselves. It is painful on receipt of their urgent applications, not to be able to make out their address. The name is illegibly written, or the place of residence entirely

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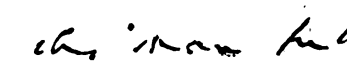
entirely omitted; the means of communication are thus utterly lost, and the small-pox may go on to commit its ravages. To write a bad hand does not betray any want of genius; but, to give a subscription illegibly, shews the greatest want of prudence, if it do not even exhibit a sort of foppery or affectation. I offer you a signature, taken from one of the passports, which, in the last and present century, often opened my way across the guarded barriers of both towns and countries on the continent.



Could Lavater have discovered in it any marks of depth or decision of character? I should rather have supposed it to have been written by an impatient female, (and I draw the observation from real life) than by *Charles Maurice Talleyrand*, that main spring of the revolutionary car of the fickle nation, which in all its motions, whether progressive or retrograde, continues to agitate the whole civilized world, and does not yet show any symptoms of standing still. Your readers, none of them being characters so notorious as *Talleyrand*, let me beg of them in their applications for matter, to write their names so that they may be read by

Yours, &c.

JOHN WALKER.

London, 15, *viij*, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WITH your permission, I beg to offer a few words in reply to T. H's observations on the case of Eliz. Crocker, which appeared in your Journal for June last. The case was drawn up for the perusal, and read at the Annual Meeting of the Western Medical Society, which was numerously attended at Sherborne, in June 1807. It was then verbally explained, that neither Dr. Proctor, nor myself, considered it as a gangrene of the whole annular substance of the intestine, but of a portion of one of the small intestines, probably of the ilium, extending through about half its circumference. It was considered remarkable by several gentlemen present, that five inches of the side of the intestine should adhere and heal in such a manner

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ner as to leave no fistulous opening through which the fæces could find an exit, and that the case was worth recording, to show what nature is sometimes capable of effecting.—It was therefore left with Dr. P. the president, to dispose of as he might think proper, with a request that he would furnish me with a copy of it, as I had not kept one. Had I received the copy before the case appeared in the Journal, I should of course have added this explanation, which would have tended to remove every doubt in the mind of T. H. In this view, Pike's case would not have appeared inapplicable, so far as the general progress and termination of the disorder were concerned. In his case, the caput cæci, with the appendicula vermiformis, were sphacelated; in Crocker's it was presumed (as stated above) that a portion of the ilium, extending through about half its circumference, had been thrown off. Under the present circumstances, however, a great deal must rest upon conjecture, as the portion of sphacelated gut was unfortunately lost; and notwithstanding the attendants upon the woman at the time still assert, that the whole extent of the intestine was annular, the true state of the case cannot be ascertained during the person's existence; but I trust an opportunity may be afforded of doing so after her death. I presume I have now said enough to satisfy T. H. that I did not quote Pike's case with the design he has attributed to me; indeed, it would have been truly extraordinary if I had. With respect to the discharge by stool in Crocker's case, noticed by T. H. it need not, I imagine, excite much wonder, (supposing five inches of the whole circumference of the intestinal canal to be in a state of gangrene) that the fæces should pass through only the day before the separation took place; as this may, I think, be easily reconciled, when we consider there could at least be no resistance in the dead part to the passage of the fæces, (the strangulation being removed) and that the part, *even in that state*, would serve to keep up the continuity of the canal until it might separate.

I am, &c.

N. DUCK.

Bristol, August 9, 1808.

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The following important Paper appeared in the last Monthly Magazine, and at the Desire of the Writer, we cheerfully give it a Place in this Journal, and recommend the Object of it to the Attention of all our Readers.

THE public having experienced the happy effects which have resulted from the adoption of a popular opinion, by Dr. Jenner; and it being a known and obvious Fact that nearly all great discoveries have been the result of accident, of random experience, or of fortuitous observation, I conceive that I shall render an important and acceptable service to mankind, by inviting information relative to all vulgar or popular remedies.

With this view, I formally address myself to the faculty in particular, and to your intelligent, inquisitive, and public-spirited readers of every description; and shall be glad to have accounts of popular opinions and received notions, relative to the origin, cause, prevention, and cure, of diseases, as well in the British islands as in foreign countries; and also of the composition of efficacious family receipts and nostrums, which differ essentially in their ingredients from the prescriptions of the materia medica.

I am perfectly sensible that such remedies and opinions must abound in numerous absurdities, and in gross errors of every kind; yet amidst the mass, I do not fear but I shall find some facts and hints, which, when submitted to the ordeal of regular science, and to the accurate investigation of the faculty, will reward me for my trouble, and prove of the highest service to the human race. I may indeed be able, by these means, to advance the art of physic more within a few months, than it could be improved in a century, without drawing together such an aggregation of experience.

For obvious reasons, I request that every communication may be signed by the name and address of the writer, and authenticated by as many actual references as convenient.

Once in two or three months, with the aid of some medical friends, I will arrange the whole in a form suited to the public eye, and so as to occupy as small a portion of your valuable miscellany as possible. Perhaps, in some cases of consequence, you may be induced hereafter to afford opportunity to your Correspondents to discuss the subjects of communication more at large, and thereby add to the stock of facts which I may be able to accumulate.

For the present, I shall assume the anonymous signature

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ture by which I have long been known to the readers of your Miscellany, and shall request that all communications may be left for me at your office, No. 6, Bridge-Street, London, free of postage. I am, &c.

COMMON SENSE.

London, June 15, 1808.

Description of Mr. DAVY'S *Grand Galvanic Battery.*

(With an Engraving.)

THE galvanic troughs which compose this battery are arranged round five tables, which are too particularly shewn in the engraving to require any letters of reference. The trough *a* is the first of the positive end of the battery, the wire *x* coming from it, conveys the effect of all the battery to the place where the experiments are made, which is in the clear space upon the centre table; the next trough is *b*, connected with *a* by means of a piece of thin sheet lead *y*; the troughs then follow round the tables in the orders of the letters of reference, *c d e f g h i k l m n o p q r s t w*, each being connected with the adjacent one by a piece of lead *y*, until we arrive at *t* and *o*, where two troughs, corresponding with *a* and *b*, are placed in the middle of the tables; the trough *v* is the first of the negative, and has a copper wire *w* proceeding from it, which is wrapped round the end of a small probe of platina; the positive wire *x* is connected with a small platina dish or saucer; the piece of potash which is to be decomposed, is placed in this dish, and a sufficient quantity of rectified naphtha is poured on it to defend the product from the atmosphere; and being touched by the platina probe, it receives the shock of the whole battery, and very quickly the metalloid begins to appear upon the dish in small globules, exactly similar in appearance to mercury. One of the troughs is shewn on a larger scale at *b*; it is a mahogany box twenty-two inches long, and five and a half within side: it has a number of grooves cut in its sides, to receive the edges of the galvanic plates, which are each composed of two plates, one of copper, the other zinc, soldered together. The inside of the box or trough, is varnished with cement, that there may be no communication from one of the cells, formed between the plates and the next; in putting the plates together they must be arranged.

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arranged, to be alternately zinc and copper; that is, the zinc side of one plate opposite the copper side of the next. The troughs have each of them two pieces of glass tube stuck upon the bottom of the trough, as shewn at *d*, to support it; by this means the troughs are insulated, so that the galvanic fluid cannot escape to the earth when the batterry is in use. The cells between the plates are filled with sulphuric acid, diluted with water; and in order to connect the effect of two or more troughs together, two plates similar to *z* are joined together by a thin piece of sheet lead, soldered to both; one of the plates *z* is copper, the other zinc. One of the plates is put into the last cell of each trough, and the lead conveys the electric fluid from one trough to the other; as the lead is so easily bent, the trough can be set down without any particular regard to position, and the lead bent to reach into them both. There are twenty troughs with twenty-five plates in each, making five hundred plates; the superficies of each plate exposed to the action of the acid, contains thirty-six square inches.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the Number of your Journal for February 1803, you were pleased to give insertion to my 'Observations on the Use of the Plaster-bandage in Ulcers?' In these observations I had stated my conviction of the utility of that mode of treatment, in several different kinds of ulcers; and had endeavoured to point out the distinctions which are necessary to success in its proper application. My experience since that time, has not enabled me to make any additional remark of importance; but it has confirmed those which I had formerly offered; and with me the practice is now fully established.

In noticing the different cases, in which the plaster-bandage might be applied, it was foreign to my intention to specify those of an opposite description. One of these, however, I shall now take occasion to mention. Where there is a disposition to gangrene in an ulcer; or where in a recent wound a similar tendency is manifested, pressure will prove injurious; and therefore until 'after the subsidence

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sidence of the inflammation,' and the parts be reduced to the state of 'a simple ulcer,' the plaster-bandage should be discontinued. In order to this effect, the free exhibition of bark, wine, and opium, will be found expedient, as in cases of erysipelas and gangrene, from an internal cause; and topically, instead of the plaster-bandage, soothing applications are indicated; such as the common cataplasm, with or without opium: or, if the discharge is fetid, the effervescing poultice, or what, in my opinion, is still better, the common poultice, with an admixture of charcoal in fine powder.

I have been induced to make these observations, because they confirm on shore, what is stated in your last Number (p. 110), by your correspondent Mr. Warnock, relative to the misapplication of the plaster-bandage on board a ship; and, by suggesting more caution, to guard against the indiscriminate employment of it.

PAPER-BANDAGE.

To prevent disappointment in those who have not made the trial, I have also to communicate the result of my experience of the strips of adhesive plaster, when spread upon *cartridge-paper*, as a substitute for linen; and I am sorry to add, that it has not answered the expectations which I had been led to form of its utility.

In the cases of hospital practice, in in-patients, *where absolute rest was enjoined*, the paper appeared to be not inferior in efficacy to calico or linen; but, in out-patients, the experiment has failed. In this class of patients, which constitutes by far the most numerous one, the friction of the paper, from its unyielding quality, on motion of the limb, has so irritated and inflamed the part, as to cause the spreading of the ulcer, and, for a time, prohibit its use altogether. In other instances, the very opposite to this has rendered the application useless. For in dyers, and such like branches of trade, where wet or moisture is predominant, softened as the paper must be by water in the pursuit of their laborious occupation, it has ceased to operate, not only as a bandage, but even as a *defensive* covering.

A profuse limpid discharge from an ulcer, would raise a similar objection: not to insist on the frequent tearing of the paper, even in a dry state, in rude attempts to produce the requisite degree of compression over the ulcerated surface.

In

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In incurable ulcers on the lower extremites, where the alleviation of the pain and mitigation of the sufferings of the patient can alone be expected, the above objections will apply with nearly equal force. And when we consider, that, on a moderate computation, an in-patient will cost a charity twelve shillings per week, while, in an out-patient, the expence will average little more than the price of the calico on which the plaster is spread; on the score of economy, a comparison can hardly be instituted. And I have not observed moderate exercise to be detrimental to the patient, or to retard the healing of the ulcer, where the limb had been supported by the cloth adhesive bandage.

I am, &c.

W. SIMMONS.

Manchester, August 6, 1808.

To Dr. BRADLEY.

DEAR SIR,

HAVING practiced vaccination during the last eight years, with results invariably satisfactory until this time, it is with feelings of somewhat a painful nature, that I submit to your notice the following detail of a case, in which the Cow Pock failed to preserve my patient from receiving the infection of Small Pox in the natural way.

As I have no cause to support but that of truth, I see no reason why this occurrence should not be recorded in the Medical and Physical Journal, although it will add one more proof to the position, that cow-pock will not *universally* protect the constitution from the contagion of the small pox. And yet, I believe the protection afforded by vaccination to be so *general*, as to rank the discovery amongst the most important and useful which are to be found in the history of medicine.

I am, &c.

THOMAS HARDY.

Walworth, Aug. 13, 1808.

April 2, 1804, I vaccinated Catharine Dawson, aged 10 weeks, with matter received from the Central House of the Royal Jennerian Society. The virus inserted in the left arm did not produce any effect; but that applied to the right arm was followed by the usual appearances. On the sixth

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sixth and seventh days after inoculation, the inflammation surrounding the vesicle was extensive, and there was rather more constitutional febrile affection than I have generally observed in cow-pock.

June 24, 1808, I inoculated the infant brother of Catharine Dawson with small-pox, and the child had a plentiful eruption of distinct pustules. Catharine, as well as another child of Mr. Dawson, nearly two years old, and vaccinated by me May 1, 1807, had free access to their brother all the time that he laboured under small-pox. On Sunday, July 17, Catharine was much indisposed, her skin hot and dry, eyes heavy, and bowels constipated. She continued ill until the Thursday following, when a considerable eruption appeared about the breast and stomach, and which I supposed to be chicken-pock, until the fourth day of the eruption, when the phenomena, both local and general, induced me reluctantly to alter my opinion. On the fifth, sixth, seventh, and eighth days of the eruption, the patient was seen by several professional friends; amongst others, by Doctors Adams, Walshman, Walker, and Lidderdale, all of whom pronounced the disease to be small-pox. And after examining the child's arm, declared the cicatrix to exhibit the exact appearance produced by vaccination.

Nothing peculiar occurred in the further progress of the disease. I inoculated the child, vaccinated last year, with matter taken from Catharine, but she has resisted not only the infection produced in her brother's case, but that of the small-pox virus inserted in both her arms. One of the punctures not inflaming at all, and the other exhibited only a slight degree of inflammation until the eighth day, which then suddenly disappeared, having been unaccompanied with pyrexia, or other symptoms of indisposition.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WE shall be much obliged if you will insert in your next Number the following result of a general inoculation for the Small Pox in Wareham, with its effects on those inoculated for Cow Pox.

We are, &c.

STAINES and EVERINGHAM.

Wareham, August 10, 1808.

ABOUT

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ABOUT the beginning of June, of the present year, a general inoculation for small-pox took place, in consequence of its appearance naturally in several parts of the town; of 283 inoculated, upwards of 30 had it in a dangerous form, of which number 10 died; of these, 8 were under 2 years of age. We are of opinion this unusual fatality was occasioned by the heat of the weather, from the children being kept too warm, and having toast and ale, spirits, &c. given them. Of 81 previously inoculated for cow-pox, 46 were innoculated, many twice, and some three times, for small-pox; of this number 10 had fever and eruptions; we have the particulars of all these cases. In one case there was one eruption, in another two, in most of them less than 20; and in two cases there were upwards of 100 eruptions, preceded by severe fever: in all these cases the eruptions either did not maturate, or maturated prematurely, and all were dry and gone in a week. Of 35 who were not inoculated for small-pox, but who were exposed to it in the severest manner, by living and sleeping together, even when there were deaths in the house from small-pox, not one has taken it; since all these resisted the casual disease, the probable conclusion is, that there would have been no cow-pox failures if none had been subjected to variolous inoculation; even the failures prove the efficacy of cow-pox rendering the subsequent small-pox devoid of danger.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WHEN such a considerable diversity of opinion has prevailed amongst anatomists and surgeons, concerning the operation for crural hernia, with respect to the *part* of the arch which ought be divided, the *direction* in which the division ought to be made, and the *manner* of executing it, we can scarcely say as yet that there is any established rule. In my operation for crural hernia, though I may seem to Mr. Bradley to have deviated from established rule, I hope, by a little explanation, it will appear, that I have scarcely deviated from what he calls the general rule; or, if at all, it has been on the safe side. In crural hernia, when the stricture is owing to the liga-

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ment only, the difficulty of introducing the finger must necessarily be very great; but when the stricture (as it was in this case) is at the neck of the sac, the finger then may be got under the arch with more facility, cutting gently with the bistoury upon the tip of the finger; in some instances the arch has been found remarkably wide. Le Dran mentions a case, where one might almost thrust four fingers with the integuments underneath it. Obs. de Chirurg. T. 2, Obs. 58.

The necessity of dividing the ligaments will appear, in order to separate the adhesions round the neck of the sac, and to get above the mouth of it, as no opening could safely be made below, from the adhesion which had taken place. If Mr. Bradley will look at the patient placed for the operation, I think he will then allow, that we may cut obliquely downwards, and towards the pubis. The incision was first begun nearly in a direction towards the umbilicus, then turning the edge of the bistoury obliquely towards the pubis, carrying it downwards, in order to avoid the spermatic end. Dr. Hull states, that in his observations on crural hernia, that the spermatic artery passes along the upper and inner side of the neck of the sac, and is liable to be divided if the ring be cut upwards and inwards; but to avoid this, he recommends "a small incision to be made through the tendon of the oblique externus, rather more than half an inch above the anterior margin of Poupart's ligament, dividing the tendon upon the direction down to the anterior margin; the spermatic cord is then to be drawn up, and the ligament divided upwards and inwards." This, certainly, would be a good general rule to follow.

Mr Cooper says, "that a stricture is a circle produced in the same way as if a cord were tied round the protruded parts, and that a division might be made at any part except the posterior, where the bone is placed, if other circumstances did not prevent it." Surely then, there can be no impropriety in speaking of adhesion being torn asunder all round, not dissected, for here the knife would be inadmissible. After the division of the ligament and the adhesions were separated, the whole of the sac with its contents might have been returned, without opening the sac; but we might as well have performed no operation at all, as to have returned the whole when the stricture was at the neck of the sac, with the contents adhering. The adhesions prevented the contents being pushed back, and also from getting into the sac below its neck; when this

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his is the case, Monro recommends the tumour to be dragged down to get it into the sac from above downwards, which was done. Mr. B. cannot deny the elasticity of the peritoneum; otherwise, how does the hernia first take place. The tumour was certainly dragged down, but not perhaps to the extent of *half an inch or more*, which Mr. B. thinks would be necessary, to expose the neck of the sac: he will recollect, the ligament was before divided; notwithstanding, he seems to doubt its ever being cut at all. This division, together with stretching the sac, brought the neck into view. The possibility of breaking adhesions, with success, is evident from the result of the case: this was effected by keeping the probe towards the sac, and not rudely pushing forwards, regardless whether the intestine is perforated or not. The opening which was made above the mouth of the sac, was not made into the *cavity of the belly*; for every portion of peritoneum which appears, or is made to appear, on the outside of the crural ring, must still be sac. Mr. Cooper relates a case, where symptoms of strangulation had existed for 10 days, and in 15 minutes after the reduction, an evacuation took place. Vid. Cooper's Hern. part ii, p. 8. In my case, the operation was performed on the 11th day, and in two hours after, an evacuation took place: this, therefore, does not need to surprise Mr. B. It would likewise be unnecessary to give a detail of symptoms, when none occurred that were particularly unpleasant, after the operation. I believe I am warranted in separating the adhesions, by the opinion of Mr. Lawrence, as well as from the success with which it has been attended. Mr. B. seems to have fallen into an error, when he says, "and when at the same time the intestine is much indurated." Now, it was not the intestine that was indurated, but the omentum. I am not aware of having made any particular innovations. The operation for crural hernia is always formidable; and in this case, more than ordinary difficulties had to be encountered; it therefore gives me great pleasure to say, the person is still a living witness of its complete success.

I am, &c.

ABRAHAM BELLOT.

Oldham, Lancashire, Aug. 11, 1808.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

SHOULD a vacant page occur in your valuable Journal, I will thank you to employ it in submitting the following remarks, respecting the Treatment of Ascites, for the consideration of our medical Brethren. And, should the plan recommended be adopted, and found to succeed with them, as it has with me, I shall sit down with the pleasing reflection, that I have contributed, in some small degree at least, towards the alleviation of human misery.

I am, &c.

WILLIAM GUY.

Chichester, August 14, 1804.

It is, I believe, generally admitted, that Paracentesis is very frequently merely a palliative remedy; that the relief it affords is but of short duration; and that when performed, by the most expert and able practitioners, it has occasionally even proved fatal; still, however, the operation in many cases cannot be dispensed with. My only object, therefore, is to prevent a needless repetition of it, by shewing, that the water may be daily evacuated, with perfect ease and safety to the patient, by the following simple method. As soon as the fluid has been discharged by the operation, I introduce through the canula a bougie, upon which, having withdrawn the former, I introduce another canula rendered air tight, by means of a small plug inserted at the outer end, over which a cap is made to fit exactly. In order to retain it in its proper situation, a circular piece of adhesive plaster, spread on leather, about five inches in diameter, (the lower part of which may, for obvious reasons, require to be lessened), is fixed to the canula by suture, holes for that purpose being made in the circular plate. A belt, nine inches wide, made of horse's girth, with straps and buckles, should be applied previous to the operation, and gradually tightened as the water runs off; which is the the only bandage required. It should have in it a circular hole as large as a crown piece, to admit the top of the canula.

This mode of conducting the business I adopted above a twelvemonth ago, and I am free to confess, that I then considered myself in full possession of the claim to originality; but on further inquiry I found, that Celsus had been before hand with me; for he, "having made a wound into the abdomen with an iron instrument, introduced a leaden

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leaden or brazen pipe, through which, the water was to be evacuated; and he directs, that when the greater part of it was discharged, the pipe should be stopped with a bit of linen, and left in the wound; then, on the following days, a hemina (about three-quarters of a pint) is to be let out every day, till no water appears to remain."

After this I cannot profess to have made a discovery; and should any merit attach, it can only be derived from the revival of a practice, to which very few trials appear to have been given, and which has long since been discarded; but, as far as I am capable of judging, without its advantages having been duly appreciated.

The chief objection to this plan has been, the fear of putrefaction taking place in the contained fluids, from the admission of air into the abdomen. But surely the same objection must obtrude itself with full force, against the very frequent repetition of paracentesis in the same patient; an example of which is recorded in your Journal for the year 1803. The operation of drawing off the water is the same in both cases; and as the canula I recommend is air tight, and closed as soon as a full stream even begins to lessen, I do not hesitate to assert, that, with these precautions, the above objection is perfectly obviated. In fact, I have put it to the test in several cases, where the water has been regularly drawn off every, or every other, day, according to its accumulation, even for a month together, which took place in an old woman of seventy, and she obtained a permanent cure.

Before I close this paper, I will briefly hint at one or two material advantages, which may probably result from the mode of treatment I have taken the liberty to recommend.

Will it not prove beneficial, although the cause of the ascites may be unsurmountable, by mitigating considerably those severe symptoms depending solely on excessive distension?

Does it not give room for remedies to operate? And will it not afford a better opportunity to the medical practitioner, of steadily pursuing those means he may deem best adapted to specific cases; instead of having his views counteracted by the necessary, but too often, unavailing endeavours, to lessen the daily accumulation of a fluid, which in the course of a few minutes may be so easily evacuated?

I may probably, on a future day, take the liberty of troubling you with a few more remarks on the subject; at present my sole aim is, to submit the plan of treatment to

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the Faculty, who, I am persuaded, will give it a fair trial; and to request that through the medium of your interesting Journal, the public may be informed of the result.

The canula may be made of silver, or ivory; in size, it should be exactly the same with that part of the trocar, which is enclosed in its proper canula, and which is to be used in the operation. In length, from the circular plate surrounding it, one inch and a quarter, which part enters the abdomen. The part external to the plate, over which a cap is screwed, or nicely fitted, is half an inch; but I think this part projecting from the body, small as it is, may admit of being still a little shortened; the advantage of which is obvious. Although that part of the canula which penetrates the cavity is open, still three or four small holes, as in a catheter, will be beneficial.

Case of Aneurism; *by Dr.* Joshua E. White, *of Waynesborough, in America.*

On Thursday, the 23d of May, 1799, I was requested to visit Mrs. P. aged 55 years, living a few miles from this place, who, since Christmas last, had been troubled with a tumour under the upper part of the sternum, which her friends supposed to be what is commonly called a wen, and for the extirpation of which I was called. During the last three weeks the swelling had increased rapidly in size. The integuments were much distended; the cutis had changed colour, and become of a very deep red. Upon examination I found it to be immoveable, of a firm consistence, and the surface smooth and equal. Throughout the whole of it a strong and violent pulsation was to be felt, which was evident to the sight at the distance of several feet. Its nature, unfortunately for the patient, was too evident, and I did not hesitate to pronounce it to be an aneurism. The patient suffered much pain, not only from the tension of the skin, but from its weight. She could not lie down with any tolerable ease, and she had shooting pains in different parts of her breast. The tumour was about ten inches in circumference round the base, and the contents could not be made to recede the least upon pressure. A few days previous to my seeing her, two small punctures had been made in the anterior part of the swelling,

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ing, at her request, upon the supposition of its being an abscess, and with a view of discharging its contents. Neither of them penetrated the aneurismal sac, though one of them divided the external coat of the artery; for at every diastole of the heart, the thin internal coat (which might here be emphatically called the "thread of life") was evidently pushed forward, and seemed every moment ready to yield to the *vis à tergo*. The discharge of blood from the vessels of the skin afforded her considerable relief from pain and tension.

The patient could not trace the origin of the tumour to any certain cause: hence it most probably arose from a partial weakness of the aorta. She had been for many years affected with the chronic rheumatism. About twelve months before the present tumour made its appearance, a smaller one had discovered itself in the same place; but which, in a short time, disappeared, without any application. With the complicated distress of pain, restless nights, and unpleasant forebodings, the patient was anxious for relief, and entreated me to do something towards it. For the removal of the tumour, no remedies, I told her, could be applied; and her friends were made acquainted with its nature, and the inevitable result. To support it against the violent impulse of the blood, I advised a covering of thin sheet lead; rest was strongly enjoined, and anodynes were occasionally directed. Expecting the tumour would soon burst, and prove instantly fatal, I left her. This event took place in a week. The discharge of blood was so enormous and sudden, that the by-standers compared it to its being "poured from a pail suddenly turned upside down." The orifice was about the size of a dollar. She expired without a groan, and in an instant: permission could not be gained to open the body. Thus we are left in ignorance as to the effects produced upon the lungs, &c. There was an evident separation of the clavicles from the sternum (most probably from an absorption of their substance), and this last was considerably elevated. The hardness which I have noticed most probably arose from a deposition of matter which sometimes takes place round an aneurismal sac, and which, in some instances, has been known to approximate to a cartilaginous or osseous nature. The person who made the punctures said, "it cut like gristle."

That the action of an artery should be able to produce such a derangement or loss of substance as appeared to be evident in this case, not only in the clavicles, but also in

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the sternum and ends of the ribs, may, at first view, appear surprising; but our wonder will cease when we know that the most violent effects are sometimes produced upon bones, as well as the softer parts, by the pulsation of a large artery in an aneurism; that the former may be, and often are, separated from their joints, elevated or displaced from their natural situation, and sometimes entirely dissolved.

To VERITAS,

SIR,

I Hope and trust you will do me the justice to believe that I feel as anxious and as interested, as any one can do, in the discovery of the writer of the paper signed W. G. by whom, I have been grossly and scandalously misrepresented, and to whom, I replied with honest indignation. Whoever may have been the author of that offensive paper, I cannot take upon myself to say; but, although at the time I wrote my answer, I certainly had ground for suspicion, yet I feel no sort of hesitation in declaring, that *my suspicion* did *not* fall upon *Dr. Girdlestone*, and that it was *not* my intention to allude to *him* in my reply,—as I ever did consider him incapable of so unprovoked and unjust an attack upon me.

I exceedingly regret that Dr. Girdlestone's name should have been so unnecessarily and improperly, as I conceive, brought forward on such an occasion, though, at the same time, it affords me great pleasure in embracing this opportunity of doing justice to his character; for which, as that of a gentleman and a scholar, I feel the highest esteem.

HARLESTONENSIS.

August 10, 1808.

To S. STROWGER.

SIR,

It is not my design to enter into any kind of controversy with you, respecting your observations on a paper, signed Harlestonensis, in the Medical Journal of April; with you, Sir, I can have *no* debate, because I feel it impossible to answer

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answer what neither I, nor any I have consulted, can comprehend.

You will observe that, in compliance to your suggestion, I have in this instance, assumed the name of

TAYLOR.

August 10, 1808.

Botanical Description of British Plants.

[Continued from our last, pp. 157—163.]

24. LICHEN. *L. vulpinus.*

Ang. Wolf Lichen.

Gen. Desc. As above.

Spec. Desc. Somewhat crustaceous; thread-like. Plant lemon colour, upright, much branched, branches nearly of a length, angular; angles unequal; at first smooth, cylind. almost orange; paler with age, pitted, compressed, at length rough with yellow farinaceous powder. Shrubby, branches divided and subdivided, variously matted, 1 or 1 ½ inch long, cylind. thin, tender, in winter changing to dull-olive.—*In clusters round branches of trees, chiefly on oak.* BL. Jan. Dec.

Use. In Norway this plant is used to poison wolves, mixed with powdered glass, and strewed upon dead carcases. It dyes woollen yellow.—*Withering.*

25. LICHEN. *L. plicatus.*

Ang. Tree moss. Officinal stringy Lichen.

Gen. Desc. As above.

Spec. Desc. Somewhat crustaceous, thread-like. Saucers grey green, radiated, lateral and terminating, nearly flat, thin, brownish underneath, without any proper border but the edge fringed with radiating hairs. *Branches* pendant, thread-like, waved, matted, unequally subdivided; the slender divisions fibrous, rather stiff, grey. The old plants are covered with a rough, whitish warty crust. —*Branches of trees in thick woods, rare.* BL. Jan. Dec.

Use. It was formerly used in the shops as an astringent to stop hæmorrhages, and cure ruptures; but it has been laid aside by modern practice. We learn from Linnæus that it is made use of by the Laplanders as an application to the feet, for the relief of excoriations occasioned by much walking.—*Lightfoot.*

26. LICHEN.

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26. Lichen. *L. prunastri.*

Gen. Desc. As above.

Spec. Desc. Leafy, herbaceous. Saucers brown, white on the outside, on pedicles, browner with age. *Foliage* soft, broad, flat, bluish white; quite white and cottony underneath; pitted, rather upright: *warts* mealy.—*On trees.* Bl. Jan. Dec.

Use. This species has the remarkable property of imbibing and retaining odours; from hence it is made use of, as the basis of many perfumed powders.—*Withering.*

27. Lichen. *L. Islandicus. L. terestris. Lichenoides rigidum.*

Ang. Eatable Iceland Lichen. Eryngo-leaved Lichen.

Gen. Desc. As above.

Spec. Desc. Leafy, herbaceous. Saucers purplish brown, v. large, circular, entire, placed on the leaf. *Leaves* brown green, ascending, edges raised and fringed, crowded, connected, tough, membranous, several inches high, divided into irregular blunt lobes: *surface* smooth, shining, channelled, wrinkled, brown or pale green. *Substance* soft; horny, stiff when dry.—*Mountains, on the ground.*

Use. This plant is extremely mucilaginous; to the taste bitter and somewhat astringent: its bitterness as well as the purgative quality, which it manifests in a recent state, may be so far dissipated by drying, or extracted by a slight infusion in water, as that it may be converted into a tolerably grateful and nutritive article of food. One oz. boiled for a quarter of an hour, in a pint of water, yielded 7 oz. of as thick mucilage as that procured by a solution of gum arabic, 1 part in 3 of water. The Icelanders employ it in its fresh state as a laxative; but when deprived of this quality, and properly prepared, it is said to be an efficacious remedy in consumptions, coughs, dysenteries, and diarrhœas. Instances of its great success in consumptive disorders are related by many foreign medical writers, as well as of its efficacy in most of the above complaints. Dr. Hers says, that he found this so successful a medicine in dysentery, that since he first used it in that way, he never had occasion to employ any other remedy; it must be observed, however, that cathartics and emetics were always repeatedly administered before he had recourse to the Lichen, to which he occasionally added also opium. Dr. Crichton observes, that there are only two species of the Phthisis pulmonalis, where this sort of L. promises a cure, viz. phthisis hæmoptoica, and p. pituitosa, or mucosa. *See Med. Journ. v.* 10, *p.* 233. Lichen, no doubt, strengthens

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ens the digestive powers, and proves extremely nutritious, but the great medicinal efficacy attributed to it at Vienna, will not readily be credited at London.—It is commonly given in the form of a decoction; 1½ oz. boiled in one quart of milk; of this a tea-cup full is directed to be drank frequently in the course of the day. If milk disagree with the stomach, a simple decoction in water may be used; care should be taken that it be boiled over a slow fire, not longer than a quarter of an hour.—*Woodville.* This plant is used both for food and physic. In spring, a decoction of the fresh leaves in water, is used by the inhabitants of Iceland to purge away noxious humours, and it is said to act powerfully: when dried, the plant acquires a very different quality. They then grind it to powder, and eat it as common food, boiling it either in milk or broth, or making bread of it. Made into broth or gruel, it is said to be very useful in coughs and consumptions, for which purpose it is now much used, according to Haller and Scopoli, at Vienna.—*Lightfoot.* When it is boiled in broth by the Icelanders, or made into gruel to mix with milk, the first decoction is always thrown away, because it possesses a purgative quality.—*Withering.* For accounts of its efficacy in pulmonary consumption, *see Obs. on Pulm. Consump. or Ess. on Lichen Islandicus,* by Dr. Regnault of Paris, pub. 1802.

28. LICHEN. *L. pulmonarius.*

Ang. Lungwort. Hazel Rag. Hazel crottles, *N. of Ireland.* Rags, Herefordshire.

Gen. Desc. As above.

Spec. Desc. Leafy, herbaceous. Saucers red brown, mostly on the edges of the foliage, or in the hollows of the leaves, facing horizontally, circular, often 2 or 3 together; plants with saucers, rare, chiefly on the higher branches of trees. *Leaves* green, jagged, blunt, smooth; pitted; downy underneath, flat broad, loose, irregularly lobed. *Subst.* flexible, white and woolly within: *surface* green, bluish when dried, brown with age, spread over with net work. *Warts* mealy, crowded, on the edges of leaves, or net work.—*Trunks of trees; moist heaps of stones.* Bl. Jan. Dec.

Use. It has been reckoned very efficacious in consumptive cases, and from thence derives its trivial name: this opinion merits a further investigation.—Woollen cloth boiled in it, is dyed of a durable orange.—*Rutty.* It is used in Herefordshire for dying the stockings of the country people, to which it gives a good durable brown colour. *Withering.*

29. LICHEN,

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29. LICHEN. *L. caperatus.*

Gen. Desc. As above.

Spec. Desc. Leafy, herbaceous. Saucers red brown, rarely found, on the larger plants, either pale flesh colour, or the same colour as the leaves. *Foliage* pale green, wrinkled, waved at the edge, creeping. Not very leafy. Circular in its growth, from 1 inch to 1 foot in diameter; the small ones like a rose, the larger, not so regular. *Leaves* oblong, cut, terminating segments broadest; not pitted, marked with oblique unequal wrinkles.—*Stones, trees, holes.* BL. Jan. Dec.

Use. In the North of Ireland, and on the Isle of Man, this is used to dye wool of an orange colour. Serge dyed with it becomes of a lemon colour, but if previously infused and boiled in urine, of a russet brown.—This is probably what the people in the North of Ireland call Stonecrottles, used to dye wool of an orange colour: it is also called Arcell, from the resemblance that it has to the Orchal in its use in dying.—*Rutty.*

30. LICHEN. *L. pustulatus.*

Gen. Desc. As above.

Spec. Desc. Root single, central, stony. *Saucers* black, flattish, rare; only on the largest plants. *Fol.* grey brown, of a single leaf, concave, circular, slightly lobed, sprinkled with black bran-like powder; pitted underneath, 2 to 5 inches over, thin, membranaceous; lobes broad, shallow, deeper in old plants, covered with pustules, hollow, opening under the leaf. Plant brittle when dry; when wet, flexible, brown green at the edge, leaden grey in the centre, dirty yellow underneath. *Substance* white.—*Rocks with a south exposure.* BL. Jan. Dec.

Use. From this species of Lichen a beautiful red colour may be prepared.—*Linn.* And it may be converted into an exceedingly black paint.—*Withering.*

31. LICHEN. *L. caninus.—L. cinereus terrestris.*

Ang. Ash-coloured ground Liverwort.

Gen. Desc. As above.

Spec. Desc. Foliage, leather-like. Tubercles reddish brown, oblong, terminating. *Fol.* ash colour, mealy, creeping, lobes blunt, woolly and veined underneath; *leaves* a span long, 1 or 2 inches broad, widening as they grow out, lobes short, blunt, single or in strata, membranaceous, grey dull dirty green. *Targets* brown; underneath smooth, flesh colour; terminating, hard, solid, oblong but roundish.—*Roots, white fibres; grows on the ground in woods, heaths, stony places.* BL. Jan. Dec.

Use,

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Use. It has a faint weak smell, and a mucid sharp taste. It was long extolled for its singular virtue in preventing and curing that dreadful disorder which is produced by the bite of rabid animals. The pulvis antilyssus, which was first recommended as a preservative against rabies canina by Mr. Dampier, and was, by the authority of Sir Hans Sloane, published in the Phil. Trans. *(v. 20, p. 49.)* was composed of equal parts of this L. dried and pulverized, and of black pepper; but this medicine being found too hot, the powder was afterwards prepared of two parts L. to one of pepper. Dr. Mead, by whose desire this powder was in 1721 adopted in the London Pharmacopœia, declares that, in his experience, he had never known it to fail where it had been used, with the assistance of cold bathing before the hydrophobia came on. He directs the patient to be blooded to the extent of nine or ten ounces; afterwards 1 ½ drachm of the powder is to be taken in the morning fasting in half a pint of cow's milk warm, for four mornings successively: after these four doses are taken, the patient is directed to go into a cold bath every morning for a month, and then three times a week for a fortnight longer. On the character of Dr. Mead, the pulvis antilyssus was long retained in the Lon. Pharm. but on the revision of that book in 1788, it was deservedly expunged.—*Woodville.* In the History of the Royal Society, it is said that a dog became rabid, and bit several others belonging to the Duke of York; but by the timely administration of this Lichen, they were all preserved from madness. *Vol.* 492 *and v.* 3, 19. It has a disagreable musty taste; 1 ½ oz. of the leaves dried and pulverized, mixed with 2 drs. of black pepper powdered, compose the once celebrated pulvis antilyssus: but instances are known, where it has not prevented the hydrophobia.—*Lightfoot.*

32. Lichen. *L. apthosus.*

Ang. Green ground Liverwort with black warts.

Gen. Desc. *As above.*

Spec. Desc. *Fol. leather-like;* green, changing to brown, sprinkled with warts, lobes blunt, not veined underneath. *Tubercles* purple, or red brown, terminating, egg-shaped, crooked, warty, on short pedicles. *Surface* smooth, fine green when young, grey brown when old. *Warts* numerous, scattered, blackish. *Roots* v. long.—*Shady, stony, mossy places, and on rocks.* Bl. Jan. Dec.

Use. It is used by the country people to cure the thrush in children: they make an infusion of it in milk and give it to the child. In large doses, it is purgative and emetic, and

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and destroys worms.—*Withering.* In Upland it is made use of by the country people for the purpose: hence, from its curing the thrush or aphthæ, it is named Apthosus. *Lightfoot.*

33. TREMELLA. *T. nostoc.*

Ang. Star-slough. Jelly rain. Tremella.

Gen. Desc. Substance gelatinous, transparent, uniform, lobed. Seeds dispersed through the jelly-like substance.

Obs. *It differs from the Gelatinous Lichens in having neither tubercles nor saucers.*

Spec. Desc. Olive-coloured, greenish or yellowish; plaited, waved. Sub-gelatinous, consisting of several leaves variously and lobed, waved, slightly adhering to the ground by a central root; substance very thin. Dark brown and brittle when dry. The seeds lie, like little strings of beads coiled up, within the folds of the plant, discoverable only by a microscope.—*Meadows and pastures after rain, on gravel walks frequent.* Bl. Jan. Dec.

Use. It is recommended by Geoffroy as anodyne and vulnerary. A distillation of it, after being macerated for some time in water, is reputed to be an useful fomentation for pains in the joints: and a few grains of it powdered, taken internally and applied externally have been extolled in ulcerous cases, in cancers, and in the fistula; but it is to be feared on no good foundation.—This was termed by the ancient alchemists the flowers of heaven; and they entertained hopes of its proving an universal menstruum; but all their researches only shewed, that its constituent parts were a portion of phlegm oil, a urinous volatile salt, and a little fixed salt.—*Lightfoot.* This plant is supposed by the country people to be the remains of a meteor, or falling star. It has lately been asserted that it is of animal origin, but without sufficient reason. After very severe frosts, a gelatinous substance is often to be found, which might pass, on a careless observation, for a Tremella, but it is the remains of frozen frogs: this substance does not shrivel up in dry weather, as the Tremella does; nor is it plaited nor waved; and generally some of the bones of the frogs may be found in it: after the severe winter of 1789, Dr. Withering reports, that he found great quantities of these on the edges, and in the water of ponds.

(To be concluded in our next.)

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Description and Treatment of Cutaneous Diseases. Order III. Rashes. Part II. On the Urticaria, Roseola, Purpura, and Erythema: and Order IV. Bullæ. On Ergsipelas Pemphygus and Pompholyx. By ROBERT WILLAN, M. D. F. A. S. Physician Extraordinary to the Fever Institution, and to the Public Dispensary in London.

THIS number completes the first Volume of Dr. Willan's valuable work. Having so often given our opinion of the merits of the author, we shall proceed at once to offer our analysis of this part of his labours.

The divisions, or as the author calls them, varieties of Urticaria, are six in number, all of which he includes under Linnæus's general description of *Sudamina* pruriginosa, inæqualia, tuberrima, dilatabilia, fugacia, recidivantia, furfuraceo-evanescentia: Hectica brevis, benigna.

It will readily appear that all the varieties cannot be applicable to this definition. The word *Sudamina* is neither classical nor correct. It might do very well for Linnæus, who, finding it impossible to attend to etymology, always defined as he proceeded. But Dr. Willan's own description is much more to the purpose, and we believe, unobjectionable in every future part of his arrangement.

"The Urticaria, or nettle-rash, says he, is characterised by round, oval, or longitudinal elevations of the cuticle, usually denominated wheals, (def. ix.) which have a white top surrounded with diffuse redness. Some of the orbicular wheals resemble tubercles in form, (def. viii.) but they are not permanent, nor have they any tendency to suppurate. The nettle-rash, though on many occasions accompanied with fever, is not contagious."

This character is as clear as words can well make it. But in referring to the *Definitions*, we find (def. ix.) a vesicle called *Bullæ*, also; which, in the present number, is confined to the fourth order. This relates, however, more to the external form than the genuine character, which is very properly remarked by the author. We have, therefore, only made this slight observation, to show that drawings cannot always give a satisfactory resemblance of such appearances.

The six varieties comprehend, Urticaria febrilis; U. evanida; U. pertans; U. conferta; U. subcutanea; U. tuberosa.

Urticaria febrilis being the most general, is first in order. It is, says

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says Dr. W. "always attended with considerable disorder of the constitution. The symptoms preceding the eruption, are, pain and sickness at the stomach, head-ach; great languor or faintness, with a disposition to sleep, a sense of anxiety, an increased quickness of the pulse, and a white fur on the tongue. In two days, or sometimes later, after these symptoms, the wheals appear with an efflorescence in patches of a vivid red, or sometimes nearly of a crimson colour. They are preceded by fits of coldness and shivering, and are attended with a most troublesome itching or tingling, which is greatly aggravated during the night, and which prevents rest for many hours. In order to avoid this inconvenience, I have known many persons sleep on a sofa without putting off their cloaths, as their distress begins immediately on uncovering the body. The patches often coalesce so as to produce a continuous redness: they appear on most parts of the surface, but they are diffused particularly on the shoulders, loins, nates, thighs, and about the knees. They extend likewise to the face; and there is sometimes a red circle round the palm of the hand, accompanied with a sensation of violent heat. They appear and disappear irregularly, first on one part, then on another, and they may be excited on any part of the skin by strong friction or scratching. During the day, the efflorescence fades, and the wheals in general subside, but both of them return with a slight febrile paroxysm in the evening. The red patches of efflorescence are often elevated above the level of the adjoining cuticle, and form dense tumours, with a hard distinct border: the interstices are of a dull white colour. When the patches are numerous, the face, or the limb chiefly covered with them, appears tense and considerably enlarged. At the latter end of the disorder, the eyelids are red and tumefied, and there is often a swelling and inflammation on the sides of the feet. On the appearance of the eruption, the pain and sickness at stomach are in general relieved, but when it disappears, those symptoms return. The whole duration of the febrile nettle-rash is seven or eight days. As the eruption declines, the tongue becomes clear, the pulse returns to its usual state, and all internal disorder ceases: the efflorescence exhibits a light purple or pink colour, and then gradually disappears, being succeeded by slight exfoliations of the cuticle."

The complaint, though rarely dangerous, is yet extremely troublesome, from the perpetual itching and uneasiness it creates. On some occasion the sickness and languor, which preceded the eruption, has produced fainting. Dr. Willan relates a case in which it proved fatal. The subject was a man about 50 years of age, and of intemperate habits. The complaint occurred early in August, beginning with nausea and great pain in the stomach, encreased by pressure, thirst, quick pulse, and slight delirium at night. On the 3d and 4th days, the skin was covered with nettle-rash, and the stomach relieved. On the 5th day the rash disappeared, and the other symptoms returned with more violence than at

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at first. On the 6th, though the eruption re-appeared on the face, yet the violent constitutional symptoms continued; and in the evening the patient died.

We should, in this instance, consider the rash as one of the symptoms, and not as the cause of all this violent constitutional affection. It is but justice to our author to admit, that by his quotations, he seems aware of this himself. From Sennertus it appears, that he sometimes considers this rash as preceding bilious fevers, and threatening the worst form of that complaint. Dr. Cleghorn remarks the same of those violent tertians which were so destructive in the Island of Minorca.

Urticaria febrilis, it is very justly remarked, occurs oftener in summer than winter, and still more frequently in those who indulge their appetite too freely: is frequently a symptom of teething, attended with its usual fretfulness, a white tongue and quick pulse. In children from two to ten it is also frequent; and among adults, men are more frequently affected than women.

Some very useful practical facts are next related, on the effect which certain substances taken into the stomach produce on the skin, and frequently on the whole constitution. These are principally almonds, mushrooms, herrings, crab-fish, muscles, and lobsters. The whole of this passage is interesting, and two important enquiries arise from it. First, is there any thing poisonous in these substances, or in any of them, viz. muscles and mushrooms? or is there only a susceptibility in certain constitutions to receive such impressions? In muscles there seems every reason to believe that the latter is really the case. As to mushrooms, when we consider their great variety, it is to be regretted, that botanists have not yet informed us with some certainty, which species has been found deleterious, or whether any one has been uniformly so in every constitution.

The second Inquiry is suggested by Dr. Willan from the conclusions of "some physicians, That Urticaria generally originates from indigestion, or some poisonous substance taken into the stomach, even though, in a few cases, it may seem to have been produced by a sudden check to perspiration, without any previous internal disorder." This we think sufficiently answered by two remarks of the author; namely, that the disease is sometimes connected with teething in children; and that it does not often return in the same person. Dr. Withering's opinion, that the rash in scarlatina, arises from the secretion of the glands of the fauces being conveyed into the stomach, and thence acting as a poison, &c. might have been spared, as well as the solitary case which follows, when offered in favour of Dr. Withering's opinion.—In the mode of treating Urticaria, we could not expect much novelty. A caution, however, is given against antimonial preparations, which sometimes operate with such violence, as to occasion fainting. We are by no means convinced that any vomits whatever are necessary.

The following is our author's description of Urticaria evanida.—

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"Without fever, and without any extensive efflorescence on the skin. The eruption consists sometimes of round wheals (Pl. xxv. Fig. 1.) at other times of longitudinal elevations of the skin (W), resembling those which are produced by the stroke of a whip. They are all white at the top, but in some there is a slight redness at the base. Though often hard and elevated, they do not contain a fluid, or tend to suppuration. They are occasionally seen on every part of the body, but they are most numerous on parts which are closely covered. The eruption appears and disappears many times in the course of a day and night, according to the temperature of the air, or to the exercise used by the person affected. It may be excited on any part of the body, in a few seconds, by strong friction or scratching, but the wheals presently subside again. A violent itching, mixed with a sensation of tingling or stinging, attends the eruption. These sensations are most troublesome to patients while they undress, and for some time after they have lain down in bed, when the eruption is usually most vivid.

"The disease thus continues, with repeated eruptions, more or less extensive, for several months, or even for years. It occurs most frequently in persons of the sanguine temperament, especially in those who have a delicate stomach and an irritable skin. The occasional causes are heat, fatigue, watching, agitation of mind, or anxiety, and a too stimulating diet.

"I have observed that females are much more liable to this complaint than males. Dr. Heberden, however, remarks, 'Males and females are equally liable to the nettle-rash: and I have observed it in all ages from childhood to decripid old age. Constitutions tainted with strumous or harrassed by rheumatic and hysteric complaints, or broken down with intemperance, palsies, and age, have all been, as far as I could judge, equally fitted for the disorder; but not more so than the soundest state of health in the vigour of life, to which all other complaints were unknown.'

"The last observation is, I think, incorrect. Persons affected with the Urticaria evanida may be capable of business and occasional exertion, but they are often low-spirited, and they seldom remain for twenty-four hours without some bodily uneasiness, as headache, lassitude, pain and sickness at the stomach, aching in the limbs, or an oppressive languor."

As this very irksome disease rarely yields to remedies, and is often produced by very slightly irritating substances applied to the skin, or by certain articles of food, Dr. Willan very properly directs the attention of the practitioner to a minute regard to these organs: yet candidly acknowledges, that in some cases, a total change of diet has produced no permanent effect on the disease: occasional laxatives he has found most serviceable of all internal remedies, and warm sea-bathing as an application to the skin.

In Urticaria perstans, the wheals are stationary, though the surrounding efflorescence is more transient. Heat excited from any cause,

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cause, produces itching: the disease is, for the most part, confined to the upper parts of the body, and continues for about three weeks. The stomach is often disordered before the eruption appears. The disease is sometimes shortened by moderate doses of aq. kali puri.

Urticaria subcutanea occurs at distant periods, and continues only a few days at each return; but the itching and tingling of the skin continue almost without intermission. The complaint in the beginning is confined to one spot, but becomes afterwards more extensive. Persons affected with it are liable to diseases in the stomach, and cramps in the lower extremities, and seldom have any sensible perspirations.

In the last division, Urticaria tuberosa, "the wheals increase to a large size, forming hard tuberosities, which seem to extend deeply into the muscular flesh, and occasion a contraction in the sinews, with total inability of motion, and a sensation of pain in the bones. These tumours are usually whitish at their tops: they rise on the arms, thighs, loins, and calf of the leg, and are very hot and painful for several hours. The eruption, in all cases under my observation, took place at night, and before morning it wholly disappeared, leaving the patient weak, languid, and sore, as if he had been bruised, or had undergone much fatigue.

"The Urticaria tuberosa often proves tedious and obstinate; I have known it continue, as above described, upwards of two years, with but a few short intervals. The only causes to which it could with probability be attributed, in the instances presented to me, were irregularities in diet, violent exercise taken by persons usually sedentary, and the too free use of spirituous liquors."

"I have, continues our author, adopted Dr. Frank's denomination of this complaint, and will subjoin one of his cases, which, however, differs in some particulars from the above statement. Adolescens viginti annorum, crapulis non parùm deditus, a prandio corripitur nauseâ et vertigine tenebricosâ. Intumescit mox, rubroque colore suffunditur facies; tumores verò palmæ latitudinem habentes, et colore rubro sed obscuro instructi, cum pruritu ad animi deliquium usque intolerabili, universam corporis, sed femorum in primis, superficiem occupare cernuntur. Accedit horror, ac demùm rigor, extremitates potissimùm inferiores violenter concutiens, sub quo exanthemata in altas, et superficiem longè ac latè superantes, seu informes offas, increscunt. Pulsus nunc durè et pleni observantur, mortisque ægrotantem consternit formido. Ad noctem, subsequitur calor, sub quo vix formati ad cutem tumores imminuuntur, ac tandèm, reliquo tamen ad vultum rubore ac universali pruritu, penitùs evanescunt. Ast verò eorundem mox locum exanthema asperrimum, digitosque sub attactu vix non offendens, miliaribus ferè simile, sed nigro ad apicem puncto insignitum ac pellucidum, subintrat. Hoc facto, imminuitur anxietas, orisque summa comparet amarities. Die morbi secundâ, purgante alvus medicinâ laxatur, quâ occasione, ægroto lectum cum frigi-

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diore aurâ commutante, posterius hoc exanthema iterùm disparet, ac primi denuò ad cutem revertuntur tumores. Alterna hæc exanthematis efflorescentia eodem per sex dies tenore continuatur, quo tempore, sectâ adinterim venâ, et antiphlogisticis et evacuantibus ægrotanti porrectis remediis, ægritudo disparuit omnis."

Some remarks follow, from the Greek and Arabian writers, which evince the learning and industry of the author, but contain very little information for the reader. With these, and a quotation from Ingrassia, the third division of the third ORDER concludes.

The fourth division of this order, comprehends Roseola. "By this title, says Dr. Willan, I mean to express a rose-coloured efflorescence, variously figured, without wheals or papulæ, and not contagious. The Roseola* can scarcely be considered as idiopathic, but though connected with different fevers, and, perhaps, with different states of the constitution, it requires notice in an arrangement of cutaneous appearances. I will, therefore, describe its principal varieties under the denominations Roseola æstiva, Roseola autumnalis, Roseola annulata, Roseola infantilis, Roseola variolosa, Roseola vaccina, Roseola miliaris."

The note is a very necessary appendage, and we recommend every reader, in the perusal of these remarks, and still more of the work, to avoid confounding the terms used by the author, with those of former writers. We enforce this the more, because we have already had occasion to remark, that when Dr. Willan adds the definition of other authors, he is not always sufficiently careful in keeping the attention of the reader to the precise meaning to which he confines his own terms.

The Roseola estiva is sometimes preceded by feverish symptoms for a few days. The eruption on the first day may be easily mistaken for the measles, and even for scarlatina, and it is on that account necessary to attend to every part of its future progress. The patches are usually larger than the measles, and die off by becoming only of a deeper roseate-colour, instead of the desquamation which follows the other disease.

Roseola autumnalis is so trifling a complaint, that nothing, we conceive, but the author's wish to render his work complete, would have induced him to notice it.

Roseola annulata is distinguished in its appearance by the annular form it assumes. The rings are at first small, but gradually dilate. The disease is extremely irksome, from the irritation it excites on the skin, and frequently continues for two, three, or four months: but a case is subjoined, in which it seems to have lasted more

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"* I use this term arbitrarily. A few writers have employed it instead of Rossalia, (page 289,) which denotes the Scarlatina. The Roseola, mentioned by Severinus, Lib. VII. De reconditâ abcessorum naturâ, is left indefinite. Quæst. V.

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more than two years, nor are we acquainted with the issue at this time.

Roseola infantilis relates properly to nothing more than those red patches, or splashes, which, during dentition, so often appear in different parts of the skin, where it is exposed to the open air. Dr. Willan has noticed a few other appearances, which he seems to have introduced on this occasion, because they were not easily referable to any other division.

The Roseola variolosa is nothing more than the general efflorescence which often precedes the small-pox eruption, whether inoculated or casual. The former is accurately described by Dimsdale; the latter by many writers on the small-pox. A very useful paragraph closes this division; in which the author remarks, that the scattered efflorescence which attends the eruption of inoculated small-pox, and which sometimes appears in distinct casual small-pox, has often been considered as a coincidence of small-pox and measles.

Roseola vaccina appears about the same time as variolosa, but is much less frequent.

Roseola miliaris often attending a miliary eruption.—"In Typhus, or contagious malignant fever, observes our author, an efflorescence also takes place occasionally, resembling, in its distribution, the specimen of Roseola, exhibited PL. XXVI. Fig. 1.—but of a darker hue. I observed such a rash on the 15th day, in one case of fever, which terminated on the 17th day. In other cases, it precedes the formation of purple spots and vibices, and, in others, it is seen early in the disease, but remains only for a short time, without any material consequences."

This concludes the author's fourth division of the third order.—We have been very short in our remarks and extracts, because almost the whole appears to us applicable to the various diseases which this kind of eruption usually precedes; and, in our opinion, the author would have done better to have considered the few instances in which the disease is idiopathic, by themselves, and afterwards to have taken those, in which it is symptomatic in a single division, marking the slight differences between each, by opposing them to each other. By making separate paragraphs, and even divisions, he has only burthened the reader's memory, and charged it with distinctions which cannot always be marked, and are never important. This peculiarity in the actions of the articular vessels, has been marked by every writer who has described accurately any cutaneous eruption. The author has referred to several writers on the inoculated and casual small-pox, as well as on vaccination: we shall just remark two others on a different disease, who have spoken of the efflorescence as a frequent forerunner of many cutaneous eruptions.

Mr. Hunter says, "The appearances upon the skin generally show themselves in every part of the body; first in discolourations, making the skin appear mottled; many of them disappearing, while

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others continue and increase with the disease." Treat. on Ven. Dis. P. 319.

This description might be uncertain, were it not for the following note attached to it.—" This is not peculiar to this disease; it often takes place in small-pox."

Dr. Adams, in his account of secondary venereal symptoms remarks. " In a few days the skin becomes generally of a mottled red. This is not, indeed, always the case; and when it is so, this appearance is not the real disease, but an affection of the skin, which often precedes small-pox, and other eruptions." Morbid Poisons, Page 165.

We have given these references, not to show any disrespect to the author, but to point out a mode in which he might have saved himself some trouble, and his readers still more: for we cannot suspect in Dr. W. any intention to assume the air of more profound investigation, by making unnecessary distinctions.

The fifth division of this order, is *Purpura*, by which term the author " proposes, with Riverius and some others, to express an efflorescence, consisting of small, distinct, purple specks and patches, attended with general debility, but not always with fever. Three striking varieties of the complaint, thus defined, may be denominated Purpura simplex, Purpura hæmorrhagica, and Purpura urticans, no one of which is contagious".—All these, particularly the second, have so near an affinity with stomacace, or sea-scurvy, that if they are really different, we wish the author had accurately marked the distinction. It is unnecessary for us to add, that sea-scurvy is now no longer imputed to the mere salt in salted provisions, but to " a sedentary mode of life, impure air, anxiety of mind, want of proper food." We should have been more cautious in this remark, on so judicious a writer, did not the nature of our work afford him an opportunity of giving us, and a large portion of his readers, that information which we shall be happy to receive from such a source.

The author remarks, that in the treatment of this disease, he should recommend moderate exercise in the open air, a generous diet, and the free use of wine, Peruvian bark, and vitriolic acid. If our suggestions are right, might it not be worth the trial to substitute the fresh vegetable acid for the vitriolic or marine. We had written thus far, when, in re-perusing the article, we met with the following passage. " Cases of Purpura seem to have been studiously multiplied in periodical publications, and in medical and chirurgical miscellanies. I consider it under all the forms described, as pertaining to scurvy, though it is not always attended with sponginess of gums and discharge of blood from them, according to the definition of scorbutus in nosology. Whether my readers agree with me in this opinion or not, they will, I think, allow, that a general view of the symptoms of sea-scurvy or land-scurvy cannot possibly form a part of the present work."

This judicious paragraph is not entirely satisfactory to us. It might

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might have done from an ordinary author; but Dr. Willan should have begun his account, by telling us that he could see no difference between Purpura and the scurvy of different authors. Land-scurvy is also an objectionable term. We know of no disease by that name; and if the author means Scorbutus, or Stomacace, as it appears by land, he should have expressed himself in that manner.—We trust our remarks will not be thought severe, or to intend any thing more than what we observed in our review of the former number, viz. that Dr. Willan has lived long, and worked hard enough to give the result of his own remarks, without encumbering himself with the opinions of others, any further than as they may illustrate his meaning.

The remainder of this chapter is devoted to petechial spots in the fevers usually called Typhus.

The fourth division of this order is Erythema; as the definition of Roseola did not admit papulæ, or tubercles, it was necessary to make this division. But on other accounts, we wish they could have been included in one, or could have succeeded each other, so that the recollection of the first, might have assisted the reader in contrasting it with the last. As it is, we shall content ourselves with transcribing the author's definition, taking notice of one of his varieties.—"The Erythema, says he, is a continuous redness of some portion of the skin, attended with disorder of the constitution, but not contagious. This appearance, though in general symptomatic, merits our attention, as it should be carefully distinguished from other eruptions, particularly from the contagious exanthemata." Instead of admitting among the varieties any effects produced by violence, as some have done, the author proposes to limit the subject under the following divisions. Erythema fugax; E. læve; E. marginatum; E. papulatum; E. tuberculatum; and E. nodosum. We shall only notice the tuberculatum; not on account of any observations we can offer, but that the reader may be aware of a disease which happily does not often occur, but which, on that account, may be less suspected.

"Erythema tuberculatum, exhibits irregular patches of red efflorescence, diffused, at first, round tumours slightly elevated, and of the size represented PL. .1 Fig. 9. The small tumours are not so hard as tubercles (Def. VIII.): they are not attended with pain or uneasiness, nor do they seem disposed to suppurate. They subside in seven or eight days, but the patches of Erythema continue a week longer, then turn livid, and gradually disappear.—This eruption extends over the arms, neck, shoulders, thighs, and legs. It commences with fever, sometimes in paroxysms as severe as those of a quotidian ague. In the intervals of the paroxysms, the patient is affected with great languor and faintness. During the second week of the eruption, the fever gives place to a state of weakness, morbid irritability, and restlessness, which is sometimes succeeded by hectical symptoms."

Dr. Willan afterwards adds, that this disease yields to none of

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those remedies which have proved successful in the other varieties, and that the only three cases in which he saw it, terminated fatally.

With this division concludes the order of Rashes. The fourth order, Bullæ, shall be noticed in our next.

Reports of the Royal Colleges of Physicians, of London, Dublin, and Edinburgh, on Vaccination; with Introductory Remarks, and other Papers. By JOSEPH ADAMS, M. D. F. L. S. Physician to the Small-Pox and Inoculation Hospitals, and to the New Finsbury or Central Dispensary. Printed for the Benefit of the Small-Pox Hospital, 8vo. 1808.

THESE Reports have already appeared in our own, and most other Journals. The introductory remarks contain little besides a statement of the dreadful ravages of the uninoculated small-pox; the inconveniences attending inoculation; and the advantages of Cow-pox, as well as its security.

The additional papers consist of one, shewing the near resemblance of the mildest small-pox to the cow-pox, illustrated by some well selected cases, and a succession of peculiarly mild inoculations from the same source; a second, contains several cases in the observation of the author and others, in which cow-pox was attended with secondary eruptions and many feverish symptoms, so as to produce a considerable resemblance to small-pox: the third, a correspondence between Dr. Hervey, Register of the College of Physicians, and the Author, by which it appears, according to the opinion of the latter, that the progress of the cow-pox has been more retarded by the indiscreet zeal of its friends, than by the violence of its enemies.

A Letter on Vaccination, or the Propriety of Inoculating Infants for the Cow-pox, considered; Addressed to those whose Example may Influence the inferior Orders. By T. W. WADLEY, Calne, 8vo.

WE cannot expect any thing very new on this hacknied subject; and we regret to see the Author insist so much on the necessity that vaccination should be performed by a member of the college of surgeons. In our opinion, the "good woman who gains her livelihood by initiating the infantile pupils in the noble science of letters," with a few practical instructions, is as fit to vaccinate as the member of any college, and some advantages might attend such an operator. She would be more likely to see the whole progress of the inoculation by the daily attendance of her scholars; she ought, however, to be obliged to keep an exact register of all her patients, which she might as easily do, as of her account current with their parents.

Vaccination Vindicated from some Prevailing Errors. By JAMES RUMSEY, of Amersham, Bucks. 8vo. London.

THE learned Author has chosen for his motto, *Veritas prevalebit.* We are precisely of the same opinion; and think, by this time, if

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if an author has nothing very new to offer, the question may be left to the decision of the public, who will ultimately form their own opinion. At the same time, we have no wish to discourage writings which may be serviceable in removing local doubts, but they can be no longer interesting to our readers.

Report of the Diseases of Edinburgh, for July 1808; *by* Mr. JOHN ROBERTON, *Surgeon.*

THE weather during the first two-thirds of this month was delightful. It was warm but not disagreeably so; and I believe, upon the whole, there has not, for many years past, in this country, been such favourable weather. About the beginning of the last third of the month, we had some thunder, followed by heavy showers of rain; and near the the end of it, we experienced some heavy dews with fogs in the evening and night, and likewise some very heavy showers of rain. The thermometer has for the most part been high, and even during the fogs and rain near the end of the month, the barometer stood high.

During this month no epidemic has existed with any degree of violence, consequently the Medical Practitioner's list has not been very crowded; and were it not for the indiscriminate, the barbarous, the ridiculous practice of at all times, but especially when business is otherwise lax, unnecessarily burning the urethra, œsophagus, rectum, &c. with caustic, the practitioner will nearly be idle. From the very great number of families also, which go into the country about this time, there is of course less sick left with us than at any other period of the year.

Ophthalmia has again, in a great measure, abated with us, as scarcely any cases of it are to be met with in practice.

The febrile complaints, which I mentioned in my last Report, while they seem to be abating in one part of the city, seem as quickly produced in another. This we must lay our account with, while those magazines of disease, from which febrile complaints in our neighbourhood arise, are suffered to exist.

Small-pox have again made their appearance among us, and in many parts of our city they, at present, exist in great profusion, and of a very bad kind. The heat of the weather too, probably increases their malignity; and it certainly

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certainly renders the complaint excessively disagreeable to those who are obliged to live in the same apartment with those affected by this loathsome disease. The medical attendant can do little more than attempt to remove this or any other disease, when it has been actually formed, and represent the effects of such complaints on Society, that the Legislators of the Country may cause the proper measures to be adopted for their prevention. The small pox has lately, and very justly, occupied the public mind in no small degree; we have now a sure preventive of it in our power; and a law to adopt these means ought to be made, and the observance of it strictly insisted on. If these measures, so loudly calling for legal interference, are still overlooked, we know well who ought to be blamed; and, in such omissions, we only see a part of that system of neglect, which, to the disgrace of our rulers, has too long existed in almost every thing that relates to the preservation of the health and lives of individuals, the Medical police of the country.

Bowel complaints have prevailed to a very considerable extent, probably caused by the use of unripe fruits, with which, from the nature of the climate, this country abounds; or to the immense quantities of *whiskey* drank after eating them. There is the greatest reason to believe that these substances taken into the stomach, are the cause of the present bowel complaints, from the manner in which the complaints make their attack. The stomach is first affected with uneasiness, soon after pain affects the head, the appetite fails, and then the diarrhœa commences, with, or sometimes without, vomiting.

I have almost uniformly, and very speedily, succeeded in my attempts to remove these complaints, by ordering an emetic to be taken; and a few hours after it had operated freely, a dose of physic to be administered.

No. 4, St. James's Street.

An Account of Diseases in an Eastern District of London, from June 20, to July 20, 1808.

ACUTE DISEASES.			CHRONIC DISEASES.	
Ephemera	3		Rheumatismus Acutus	5
Tetanus	1		Tussis	10
Hæmoptysis	3		Tussis cum Dyspnœa	8
Ophthalmia	4		Phthisis Pulmonalis	4
			Gastrodynia	

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Gastrodynia	7	PUERPERAL DISEASES.	
Enterodynia	9	Menorrhagia Lochialis	5
Diarrhœa	17	Ephemera	3
Vertigo	2	Diarrhœa	5
Hemiplegia	3	Hæmorrhois	2
Dysuria	7	INFANTILE DISEASES.	
Fluor Albus	9	Febres Mesenterica	2
Menorrhagia	5	Ophthalmia	4
Amenorrhœa	4	Hernia	1
Herpes	3	Convulsio	2
Rheumatismus Chronicus	9		

The case of Tetanus referred to in the list, was of that species commonly denominated Opisthotonos. The subject of it was a young man engaged in a mechanical employment. This disease, though it occurs most frequently in warm climates, yet is occasionally to be met with in all situations. It has been observed to appear with particular frequency, during any sudden viscissitudes in the temperature of the air, and has not unfrequently been traced to the sudden application of cold to a body greatly heated by exercise. In our own country, it may often be attributed to the injury of a nerve, by puncture or laceration.

It generally approaches with a sense of stiffness in the back of the head and neck; which, by degrees, extends to the neighbouring muscles: the head is drawn backwards, a rigidity of the muscles of the lower jaw succeeds, and by degrees the spasm becomes so strong, as to close the teeth, and produce what is called the locked jaw. In the instance referred to, (as before observed) the disease assumed all the characters of that species, which is termed opisthotonos. Besides the affection of the muscles of the neck, already mentioned, those along the spine became affected also, and the trunk of the body was very strongly drawn backwards.

Every attempt to remove the disease by anodyne and antispasmodic remedies prove fruitless, and the patient fell a victim to the disease. To the question which was repeatedly put to him, whether he had received any slight wound or injury, he replied in the negative; but upon lifting him into a warm bath, a mark was discovered in one of his feet, which he said was occasioned by a nail running into it some time before. This circumstance afforded a sufficient explanation of the cause of the symptoms which have been related.

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INTELLIGENCE.

The COURT of the ROYAL COLLEGE OF SURGEONS have resolved, that the JACKSONIAN PRIZE SUBJECT, for the year 1809, for the Premium of 10l. to the Author of the best Dissertation on a Practical Subject in Surgery, be "Fractures of the Bones of the Trunk, and the Treatment of them."

Candidates must be Members of the College, not on the court of assistants.

The Dissertations must be in English; and the number and importance of facts in the composition will be considered their chief excellence.

Every Dissertation must have a Motto or Device of distinction; but no Dissertation, Motto, or Device, must be in the hand-writing of the Author.

Every Dissertation must be accompanied by a paper, sealed up, (not with the impression of the Author's seal) containing the name and residence of the Author, and having on the outside a Motto, (not in the hand-writing of the author), corresponding with the Motto or Device on the Dissertation.

The paper corresponding in Motto or Device with either of those affixed to the Dissertation, to the author of which the premium shall be adjudged, will necessarily be opened: the other papers will be returned unopened upon authenticated application, together with the Dissertations to which they shall respectively belong.

Dissertations must be addressed to the Secretary, and delivered at the College before Christmas-day 1809.

The adjudication will be in the month of April 1809.

Every unapproved Dissertation which shall remain three years unclaimed, will be burnt, together with the paper containing the name of the Author of such Dissertation, unopened, in the presence of the Jacksonian Committee.

It is judged proper to repeat, that the Prize Subject for the present year, 1808, is, "CANCER:" the Dissertations upon which must be delivered before Christmas-day, 1808.

Mr. WALKER, of Edinburgh, has ascertained, by numerous observations, that the *use of the medulla of bones*, which has so long puzzled physiologists, *is to regulate their internal growth*. A paper, detailing these observations, will soon appear in this Journal.

The same gentleman has observed, that the organ of voice in frogs consists of two membraneous bags, hitherto undescribed, placed one on each side of the tongue, immediately behind the curvature of the lower-jaw. These bags have each a circular aperture, which, by means of a sphincter, they can contract at pleasure; and it is by expressing air through them, that they produce their peculiar croaking noise.

Mr.

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Mr. JAMES PHŒNIX, of Liverpool, has found that there is a great difference between electrical shocks from a Leyden phial filled from the conductor in the common way, and those filled as follows. He stood on an insulated stool, laid one finger on the prime conductor, and filled the jar from the other; when, on receiving the shocks, he found them so considerably augmented, that two taken in this manner incommoded him more than a dozen in the common method.

Mr. GEORGE SINGER is constructing an electrical apparatus with a cylinder eighteen inches in diameter, which, from experiments made with cylinders of nine and fifteen inches diameter, promises to afford at least equal intensity and regularity of action with with plate machines. A series of experiments will be shortly instituted on this apparatus, and their results communicated to the public.

A fish, called by the Spaniards the *curbinata*, the largest of which does not weigh more than two pounds, abounds in the river Oronoko, in South America. It is of an excellent flavour, but is less appreciated for its nutritive quality than for two stones lodged in the head, in the place which the brain ought to occupy. They have each the shape of an almond without the shell, and the brilliant colour of mother of pearl. These stones are bought for their weight in gold, on account of their specific virtue against a retention of urine. It is sufficient to take three grains finely powdered in a spoonful of wine or water, to cause an instant discharge; but too large a dose relaxes the muscles, and occasions an inability of retention.

The production of fire by the mere compression of atmospheric air, was a fact first observed about three years ago in France. This curious discovery has lately been applied to practical utility in this country, by means of an instrument which answers all the purposes of that well-known article in domestic economy, a tinder-box. It consists of a common syringe, about ten inches long, and not more than five eighths of inteanal bore. At the lower extremity it is furnished with a cap which serves as a chamber to receive the substance to be fired, and is attached to the instrument by a screw. Instead of this cap, a common stop-cock may be employed. To use the instrument, the cap is unscrewed, or the stop-cock turned, a small piece of amadou or common tinder, is placed in the chamber, and the cap is screwed on again. If the piston of the instrument be now depressed with as quick a motion as possible, the condensation of the air is so active, as to set the amadou on fire.

Mr. J. WRIGHT has invented a portable artificial horizon for taking altitudes either by sea or land. With this instrument and a quadrant, varying from those of the usual construction in having a larger horizon glass, the silver surface larger, and a different sight vane, the meridian altitudes of all bright stars, as they come to the

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the meridian may be taken; by which means the latitude might frequently be found by observations at night, and with as much ease as by the sun at noon day; the altitudes of the moon and stars to correct the lunar problem for the longitude will also be more accurately and easily taken with it. For altitudes of the sun or moon, and for all terrestrial objects, an octant of the ordinary construction will answer every purpose.

The Medical Lectures in the UNIVERSITY OF GLASGOW, will begin on Tuesday November 1, at the following hours.—Dietetics, Materia Medica, and Pharmacy, by Dr. MILLAR, at ten o'clock in the forenoon.—Midwifery, by Mr. TOWERS, at eleven.—Theory and Practice of Physic, by Dr. FREER, at twelve.——Anatomy and Surgery, by Dr. JEFFRAY, at two o'clock in the afternoon.—Chemistry and Chemical Pharmacy, by Dr. CLEGHORN, at seven.—Clinical Lectures on the cases of patients in the Royal Infirmary, on Thursday evening the 10th of November, at six.—Dr. BROWN will commence his Lectures on Botany about the beginning of May next.

MEDICAL THEATRE, LONDON HOSPITAL.—The following Lectures will commence on October 1st. viz.—Theory and Practice of Physic, by Dr. COOKE, and Dr. YELLOLY.—Chemistry, by Dr. YELLOLY.—Theory and Practice of Midwifery, by Dr. DENNISON and Dr. Byam DENNISON.—Clinical Lectures on Surgical Cases, by Sir W. BLIZARD, and Mr. Thos. BLIZARD. Further particulars may be known by applying to Mr. PRICE, Apothecary at the Hospital.

ST. BARTHOLOMEW'S HOSPITAL.—The Autumnal Courses of Lectures will commence on Saturday, October 1, at two o'clock, in the Medical Theatre of this Hospital, in the following manner: On the Theory and Practice of Medicine, by Dr. ROBERTS and Dr. POWELL.—On Anatomy and Physiology, by Mr. ABERNETHY.—Anatomical Demonstrations, by Mr. LAWRENCE.—On Comparative Anatomy, by Mr. MACARTNEY.—On the Theory and Practice of Surgery, by Mr. ABERNETHY.—On the Theory and Practice of Midwifery, by Dr. THYNNE.—On Chemistry, by Dr. HUE.

The Autumnal Course of Lectures at ST. THOMAS'S and GUY'S HOSPITALS, will commence the beginning of October.

At ST. THOMAS'S.—Anatomy, and the Operations of Surgery, by Mr. CLINE and Mr. COOPER.—Principles and Practice of Surgery, by Mr. COOPER.

At GUY'S.—Practice of Medicine, by Dr. BABINGTON and Dr. CURRY.—Chemistry, by Dr. BABINGTON, Dr. MARCET, and Mr. ALLEN.—Experimental Philosophy, by Mr. ALLEN.—Theory of Medicine, and Materia Medica, by Drs. CURRY and CHOLMELEY.—Midwifery, and Diseases of Women and Children, by Dr. HAIGHTON.—Physiology, or Laws of the Animal Œconomy, by Dr. HAIGHTON.—Clinical Lectures on Select Medical Cases,

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Cases, by Dr. BABINGTON, Dr. CURRY, and Dr. MARCET.—Structure and Diseases of the Teeth, by Mr. FOX.—These several Lectures are so arranged, that no two of them interfere in the hours of attendance; and the whole, together with the Lectures on Anatomy, and those on the Principles and Practice of Surgery, given at the Theatre of St. Thomas's Hospital adjoining, is calculated to form a complete Course of Medical and Chirurgical Instructions.

Mr. BROOKES's Spring Course of Lectures on Anatomy, Physiology, and Surgery, will commence on Saturday, October the 1st, at two o'clock in the Afternoon, at the Theatre of Anatomy, Blenheim-Street, Great Marlborough-Street.

Mr. TAUNTON's Autumnal Course of Lectures on Anatomy, Physiology, Pathology, and Surgery, will commence on Saturday, Oct. 1, 1808. Further Particulars may be learned on application to Mr. Taunton, Greville Street, Hatton Garden.

Mr. THOMAS's Lectures on the Principles and Operations of Surgery, will commence early in October, as usual. A Prospectus may be had at his house, Leicester-place, or at the Theatre of Anatomy, in Windmill-street.

Mr. WILSON's Lectures on Anatomy, Physiology, Pathology, and Surgery, will begin on Saturday, Oct. 1, at two o'clock in the afternoon as usual. A plan of the Course, with the terms of Attendance, may be had by applying at Mr. Wilson's house, in Great Windmill Street.

Mr. ACCUM's Lectures on Experimental Chemistry and Analytical Mineralogy, commence at the Chemical Laboratory, Compton-street, Soho, October the 18th. The Lectures on Experimental Chemistry, comprise the Practical Operations of the Scientific Laboratory; general Rules to be observed in the performance of Experiments, and summary Experimental Elucidations of the Science of Chemical Philosophy. The Lectures on Analytical Mineralogy devolve to the Art of distinguishing Minerals, the Modes of examining them by Chemical Agencies; and general process of Analysis, with a summary View of Mineralogical Science, and its application to the useful Arts and Manufactures.

Dr. BUXTON will, on Monday Oct. 3, commence a Course of Lectures on the Theory and Practice of Medicine, and one on Materia Medica, at the London Hospital.

Mr. CARPUE will commence his Lectures on Anatomy, Surgery, &c. on the 1st. of October.—Particulars may be known by applying to Mr. Carpue, No. 50, Dean Street, Soho.

Dr. CLARKE and Mr. CLARKE, will begin their Winter Course of Lectures on Midwifery and the Diseases of Women and Children, on Wednesday Oct. 5. The Lectures are read every day at the house of Mr. Clarke, No. 10, Upper John Street, Golden Square, from a quarter past ten o'clock in the morning, till a quarter

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quarter past eleven, for the convenience of Students attending the Hospitals. For particulars, apply to Dr. Clarke, No. 1, New Burlington Street; or to Mr. Clarke, No. 10, Upper John Street, Golden Square.

Dr. Clough, No. 68, Berner's Street, will, on Monday the 17th of October, at ten o'clock in the morning, commence his Course of Lectures on Puerperal Anatomy, Physiology, and Pathology. A Syllabus and Prospectus of which, may be had of Dr. Clough, as above; J. Callow, Crown Court, Soho; and at the Mary-le-bone Dispensary, Welbeck Street, Cavendish Square. An Evening Course, for the convenience of such Students as may be otherwise engaged in Anatomical pursuits, will be given on Tuesdays, Thursdays, and Saturdays, at seven. The first Lecture commencing on the Evening of the 18th Instant.

Dr. Clutterbuck, Member of the Royal College of Physicians, and one of the Physicians to the General Dispensary, will begin his Winter Course of Lectures on the Theory and Practice of Physic, the Principles of Pharmacy, and the Materia Medica, on Tuesday October 4, at ten o'clock in the Morning: to be continued daily (Saturdays excepted) at the same hour, at the General Dispensary, Aldersgate Street, near St. Bartholomew's Hospital. —— Clinical Lectures, by Dr. Clutterbuck and Dr. Birkbeck, on the most interresting cases occurring in the Practice of the Dispensary, will be given *gratis* to the pupils of the Class, on Saturdays, through the season.—Further particulars, with a Prospectus, may be had on application at the Dispensary, or at No. 1, Crescent, New Bridge Street.

On Saturday, Oct. 1st, Dr. Dennison and Dr. Byam Dennison, will commence their Lectures on the Theory and Practice of Midwifery and the Diseases of Women and Children, at the London Hospital. For Particulars, apply at the Doctor's house, No. 37, Broad Street Buildings; or to Mr. Price, Apothecary, at the Hospital.

Mr. Moor, Surgeon Dentist to Her Royal Highness the Duchess of York, will commence a course of Lectures on the Structure and Diseases of the Teeth, on the 27th of October, in which will be explained the complete Practice of the Dentist.—Further Particulars may be known at his House, No. 6, Palsgrave Place, Temple.

Dr. J. F. Davis, of Bath, has in the press an Inquiry into the Symptoms of Carditis, or the Inflammation of the Heart, illustrated by Cases and Dissections. It is Dr. Davis's design to show, that the Faculty have been mistaken with regard to the symptoms of this disease; that it is probably of more frequent occurrence than has been supposed; and that, contrary to the assertions of our best systematic writers, there are circumstances by which it may sometimes be distinguished in practice.

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THE

Medical and Physical Journal.

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CASES, CHIEFLY OF ACCIDENTAL AND SCROPHULOUS SORES, CURED BY THE INTERNAL USE OF CANTHARIDES.

By JOHN ROBERTON, Surgeon, EDINBURGH.

IN every period of the history of Surgery, the most successful plans adopted in the treatment of ulcers, seem all to have acted on the same principle; and in whatever manner these various applications have been made, the substances employed have uniformly been of a stimulating quality. These have almost always produced escarotic effects, and been applied externally. Of late years, it is well known that the adhesive straps and roller have been successfully employed; and I may mention, that it is alone by stimulating the parts to which they are applied, that these can produce their beneficial effects.

The natural transition from producing and supporting such a state of action by any kind of external means, to that of effecting the same purpose by the external use of such medicines as cantharides, must be evident to every one who knows any thing of the extensively stimulating powers of that drug.

It is upon this principle that all other stimuli, applied internally to sores, &c. produce similar effects, though I have found, so far as my experience goes, none of them, in their operation, so permanently effectual as that medicine. I avoided mentioning this fact at an earlier period, because I wished to mature my observations on the subject. An individual, however, to whom I personally, among several other observations, probably of some importance, mentioned this one, has, *since the publication of my work on cantharides*, in which the principle was more than merely inculcated, thought proper, consistently with the the freedoms he has taken with every other author, to state it without any acknowledgement to me; although he knew

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I ntended to publish on the subject at a subsequent period. The Critical Review, however, for March 1808, and the Edinburgh Medical and Surgical Journal, published on the 1st of July last; indeed, every Review of his book, proves that I am not a solitary sufferer from the plagiarisms of the same person.

One of the misfortunes of such characters is, that, when they wish to plunder the labours of others, they know not really what use to make of them. Anxious to apply the same principle to digitalis, and thus have an opportunity of claiming it as his own, the same person publicly asserted the efficiency of that medicine in similar cases; and although he had no experience on the subject, dared to adduce, in proof of it, one of his cases, treated at Glasgow, and even presumed to call, as evidence to the truth of his assertions, the respectable Doctors Jeffery and Cleghorn of that city. The first of these gentlemen accordingly thought it his duty publicly to state the falsehood of these assertions, and to observe, that, if the other parts of the work were as little to be relied upon, it deserved to be committed to the flames. This, therefore, is a specimen of the errors that arise from attempts to claim principles of which the plagiarist knows not the nature.

Not satisfied with claiming principles of which he himself was ignorant, the same person has even persuaded a young man, just commencing the study of medicine, and of whom he has contrived to make a tool, but whose name I wish not to mention unless I am compelled, to claim the mere notion of applying cantharides to the cure of glanders in the horse. Although I first suggested this notion, I by no means stated it as a discovery, because experiments did not fully warrant me to do so. But, it appears, that arrogance and presumption are in the inverse ratio of knowledge.

I know that objections, from want of success, have been started to the treatment of several diseases by the cantharides. Such opposition I expected to meet with whenever I should make known the success of my practice with this substance.

It is a melancholy but well established fact in our profession, that the violence of opposition, which any improvement, either in surgery or medicine, meets with, is too often exactly in proportion to its importance in the removal of disease. While with the greatest facility, any mysterious agent which can be proposed for the recovery of health is, without scruple, admitted into universal use, that

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that which, to a demonstration, can be proved of the greatest benefit to the human race, is, when used, employed with fear and trembling, and seldom before a century or two elapse, so universally or to such extent as alone can insure all the utility of which it is capable.

To those who without prejudice, or a wish to condemn, give this substance a fair trial in such complaints as may indicate its use, and who really have been unsuccessful, I have only to observe, that I can very easily account for the failure of many medical practitioners in the treatment of diseases by cantharides. It was not till after many years experience, with the closest attention I could bestow to its operation, that I became at all successful in the removal of complaints with that medicine; and, even then I failed in the removal of some cases, which, with greater experience in the use of medicine, I have since completely effected. It will undoubtedly be with them, as it was with myself; but by cautiously persevering in its use, they will be sensible of its importance.

CASE I.

A stout, and apparently healthy man, aged 55, about a year ago, had the middle of the sole of his foot completely perforated by a large nail. The nail was withdrawn, and the wound in a few weeks healed; but still some degree of swelling of that foot, especially towards evening, troubled him.

About four months ago, the ankle joint became somewhat more stiff than usual, and several small pustules broke out around the outer ankle, which soon formed very painful sores. In two weeks more the œdematous swelling had reached nearly to the knee, and several inches of the skin around the ankle joint had become of a dark red colour.

He now, (Nov. 3, 1807,) became alarmed at his situation, came to Edinburgh and put himself under my care. The only application he had made to his sores, was simple ointment with the constant use of a tight stocking, from which he had derived no benefit. I therefore prescribed tinct. canth. ℥ß. aq. font. ℥vi. M. a table spoonful of which was to be taken thrice a day, and the leg also to be rolled from the toe to the knee with a bandage of cotton cloth.—This medicine, in sufficient doses to produce slight yet constant pain in voiding urine, with the application of the bandage, completely cured him in a month. I however advised him,

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on going into the country, to continue the application of the bandage for several months.

Feb. 1808. Having about a fortnight ago fatigued himself by carrying heavy burthens almost for a whole day, he was seized with pain in the formerly affected leg, and it has now become œdematous, acquired a livid colour, extending about two thirds up the leg, and discharging a thin watery fluid from its whole surface. I ordered him to recommence the canth. as formerly directed, and again to apply the roller.

March 1st. The discharge from the diseased surface is thick and yellow, while the œdema and livid appearance are gradually disappearing.

He having occasion to go to London, and being now pretty well acquainted with the nature of the medicine, I have desired him to continue it in absence, and to write to me if any adverse symptom occurs.

May, 20th. This patient waited on me to day, to inform me of his leg having perfectly recovered. I have nevertheless desired him to avoid all fatigue for several months, and still to wear a roller.

July, 1808. This patient has, for two or three weeks laid aside the roller, and has had no return of his complaint.

CASE II.

Nov. 6, 1806.—A carpenter, aged 29 years, about twelve years ago, cut his left leg with an adze. The sore has, since that time, been frequently skinned over, but it always, in a short time after, broke out again. He has applied to several Medical Gentlemen for relief, and, after every external application, from the mildest to the most corrosive, has been used without effect, he has for several years considered it as incurable, but while it permitted him to follow his ordinary occupation, he has been contented.

This patient has one sore near the middle of the tibia, about 2 ½ inches in diameter, with thick irregular edges, discharging thin brownish matter in considerable quantity, and several other sores about the size of a sixpence surrounding it; but these have only troubled him a year, and they are neither deep nor have they thick edges, although they discharge matter equally unhealthy with the large sore. The leg and foot are swelled, and about two thirds of its extent is of a livid colour. I have therefore prescribed tinct. canth. ℥i; aq. font. ℥vi. M.; a table-spoonful of which was to be taken four times a day.

18th. This patient has continued to use the cantharides in

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in sufficient doses to produce slight difficulty in voiding urine. The discharge has become uncommonly plentiful, is of tolerably good consistence, attended with stiffness and soreness in the ulcerated parts.

30th. He has continued to take the cantharides, and now the smaller sores seem nearly healed, but there is no alteration in the appearance of the large one. The discharge from it to day, and three days past, has been alarmingly great. I even believed it impossible for such a discharge to proceed from an ulcer of these dimensions, and suspecting sinus, I minutely examined the whole of its surface with a probe, but could discover none; the cantharides were therefore continued.

Dec. 7th. All the smaller sores were completely healed, but there was no alteration of the larger one. This day he became impatient, and took a very large dose of cantharides. About an hour afterwards he became sick and vomited, and during the night voided brown bloody matter along with his urine. He informed me of this circumstance, and I advised him to take a smart cathartic and use warm applications above the pubes. The cathartic was rejected by vomiting, and indeed, for two days, nothing would remain on his stomach, and it was not till after he had suffered the most excruciating pain, that these symptoms began to abate. The sore has now become so irritable that he cannot even allow the weight of the common dressing to press on it.

17th. The above symptoms have disappeared, but the sore does not seem to have been much affected by what has been done.

20th. This day I began to use a solution of the muriate of mercury as a wash, and desired him to recommence the cantharides, none of which he had taken since the 7th.

29th. The sore now began to have a very favourable appearance, the whole surface looking florid, the edges becoming thinner, and its diameter not being so great as formerly. The cantharides and solution were therefore continued.

Jan. 20, 1807. The sore now evidently contracted in size. The solution was applied where the edges seemed not disposed to heal, and this produced the most beneficial effects. The cantharides were still continued.

March 25th. The sore remained nearly in the same state since last report, although he had taken the cantharides in sufficient doses to affect his urinary organs.

April 6th. The sore now assumed a black unhealthy appearance,

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pearance, and became thicker in the edges. He had continued to take his medicines regularly, and in every respect to obey my prescription. My patient could only account for this change of appearance from his having about three days ago exposed himself to very severe fatigue for a whole day; since which time the sore had gradually degenerated.

May 20th. Although he had taken the cantharides regularly, and in sufficient doses since last report, the sore had still continued to degenerate, and it was now larger than I ever saw it. I certainly would now have omitted the use of the cantharides for the present, had it given him any uneasiness at the stomach, or seemed to affect his pulse in an unfavorable way, but as all went on well, I desired him to continue.

26th. The sore has again assumed a more healthy appearance, and discharges thicker matter.

August, 1807. He had regularly continued the cantharides since last report, and his leg was now perfectly well, and he himself able to work at his trade.

July, 1808. This patient still remained perfectly well.

CASE III.

A woman, aged 35, of a robust habit of body, was, about 18 years ago, affected with Erysipelas in her right leg, which occupied the whole space from the knee to the point of her toes. Leeches were applied over the inner ankle, and the wounds made by them degenerated into foul ulcers. These, however, soon healed, and the redness entirely disappeared from the limb. She still complained of weakness in that leg, and being a kitchen servant, and obliged to fatigue herself considerably, she was often before night scarcely capable of supporting her weight upon it. Two years after this, she twisted the ankle joint of this leg; and that part of the leg which had been formerly ulcerated, had the skin rubbed off it, and an astonishing quantity of blood was discharged by the opening. This wound, however, was soon healed, but the leg was always in a greater or less degree swelled for eight years afterward. About that time she had another attack of Erysipelas in the same leg, which she attributed to her living in a damp house at that time. This disappeared in about a fortnight, and the ulcerated part formerly mentioned, broke out again. It was again healed by the application of ointment, but still the swelling continued, particularly toward the evening.

Eighteen

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Eighteen months ago, after undergoing considerable fatigue, the swelling in her leg increased to an amazing extent, the ulcerations again commenced, and varicose veins appeared in different parts of it. She became greatly alarmed at this appearance, and applied for assistance at the Royal Infirmary of this place. There, adhesive straps were applied to the ulcerated parts, and bandages of cotton cloth were used. She was dismissed from the Infirmary perfectly cured in less than a month.

In October last she was again exposed to dampness and fatigue, and the swellings and ulcerations on the same place again broke out. She again applied to the Infirmary, where the same practice was followed as formerly mentioned. From this she derived great benefit, and was a second time dismissed cured. A few days after she left the House, the ulcerations became much worse, and the swelling increased. This last she kept under by bandaging, but the ulcerations continued to extend; and Feb. 1, 1808, when she applied to me and gave me the above account of her disease, her leg, from about a hand breadth below the knee to the upper part of the foot, was of a livid colour. The varicose veins still existed all over the diseased surface of the leg, and there were two ulcers above the inner maleolus, the smallest being about an inch in diameter, and the other of an irregular form in appearance, and about six or eight times the size of the other; both of them discharging thin matter. I prescribed tinct. cantharid. ℥iß. twenty drops to be taken thrice a day in a glass of water, and I desired her to apply a tight roller of cotton cloth to the diseased leg from the point of the toes to her knee.

10th. The sores look very clean, but she has experienced no effect on the urinary organs from the use of the cantharides, which are to be continued.

13th. Slight pain now occurred in voiding urine, and, in different parts of the largest sores, granulations are distinctly seen shooting across it, but not the smallest diminution in its size has taken place. The œdema of the leg has decreased in a surprising degree, but the varicose veins and livid appearance remain as formerly; I therefore ordered the cantharides, &c. to be continued.

28th. The sores were now healing gradually, and the general appearance of the leg was much improved. She experienced no weakness in it, being able to use it without any inconvenience from the greatest exertion. She has frequently felt pain in voiding urine, but this was only in

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a slight degree. The cantharides, &c. were, therefore, continued. There was, till the 20th of April following, little variation in the daily reports, and the wounded surface being at that time quite healed, she went into the country.

CASE IV.

A man, aged 35, about five years ago, fatigued himself by walking a great deal, which was immediately followed by a swelling in both legs; the skin also broke in several places; and, in the course of a few weeks there was a constant discharge from them of a thin watery fluid, attended with acute pain from the knees to the ankles. Mercury was prescribed, which weakened him very much, but did not in the least relieve him of his complaint. After he gave over the use of this medicine, the swelling began to abate, but the eruption, with the discharge, continued to extend to his thighs; and, in a few months, it covered his whole body, and even his arms to the points of his fingers. All the diseased surface discharged thin matter, similar to what was at first discharged from his legs, attended with some pain, but his legs were always more so than any other part of his body. He then came from the country into the Infirmary of this city, but derived no benefit from the prescriptions he received there. In consequence of this disease, he had lived in great misery for four years past, during which time he had used almost every external application that whim or superstition could suggest, but derived no benefit from them. Of late he had used ung. citrin. which he thought kept the parts soft, but did no other good. I desired him to lay aside all external applications, and I prescribed on the 1st of Nov. 1806, tinct. canth. ℥ß. aq. font. ℥vi. M. A table spoonful to be taken four times a-day.

4th He repeated the mixture with ℥j. of cantharides. That evening he felt slight pain in voiding urine, and a very disagreeable sensation all over his body.

7th. He repeated the mixture, and his symptoms were as formerly.

10th. Itching all over the body had become very troublesome to him.

16th. It was now with the greatest difficulty I could prevail on my patient to continue the tincture, on account of the very disagreeable sensations it produced all over the body, particularly as the eruption seemed to him worse than before he began the use of it.

20th. This

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20th. This morning he felt less of that soreness and disagreeable sensation than formerly, particularly about the lower parts of his legs where the disease first began. I still ordered the cantharides to be continued.

24th. The itching does not now trouble him in his legs, and it is beginning to decrease along the thighs. The cantharides still to be continued.

Dec. 14. His legs were now perfectly well, but the other parts of his body continued as last reported. For two weeks past, he had taken about ℥j of the tincture daily, and I desired him to continue it.

28th. I now diminished the dose of the cantharides to ʒjv. per diem, on account of its violent effects on the urinary organs. The itching was not so general as formerly, but, where felt, it was equally severe as before the use of the cantharides. The discharge from the eruption was now entirely gone, and his legs were as well as ever. He had all along observed that the affection of his urinary organs was uncommonly severe, a few hours after he used any kind of spirituous liquors. I ordered ʒjv. of the cantharides to be taken daily.

Jan. 6. The eruption seemed now to be disappearing very rapidly from every part of his body, and he was stouter and in better health than he had been since the commencement of his complaint. I desired ʒiij. of the cantharides to be continued per diem.

16th. Two days ago, a spot above the right eye became inflamed and painful; spread in every direction; and, in two days the right eye was much inflamed, and likewise the upper part of the right cheek. This diseased surface discharged a thin watery matter. The part was bathed with spt. vin. and a few drops of tinct. thebaic were dropped into the eye. In a few days this affection was quite removed; the eruption over the body was now almost completely well; I however ordered the cantharides to be continued.

Feb. 1st. The eruption on various parts of the body was equally severe as before the use of the cantharides. I therefore desired him to continue the cantharides, and to bathe the affected parts with spt. vini.

20th. The eruption had entirely disappeared, and he was, in every respect, perfectly well. I nevertheless still ordered the cantharides to be continued in small doses.

April 2d. The eruption again broke out in three different parts of his body. He had taken no cantharides for about ten days; I desired him to recommence it in small doses.

May

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May 1. This patient was now completely recovered, but I desired him to continue the cantharides a few weeks, and to inform me if his complaint returned.

July 10th, 1808. I was this day informed that this patient still continued perfectly well, and free from his complaint.

CASE V.

Dec. 24th, 1806. A Gentleman aged 35, lame, and of a weakly habit of body, applied to me in September last, with a small tumour, of a livid colour, situated about three inches toward the right side of the thyroid cartilage, which evidently contained fluid matter; but he would not submit to have it opened, and he went into the country. This day he returned, and informed me, that the tumour never had increased beyond the size of a small walnut, and had never given him pain. It had broke and discharged thin matter about the beginning of the present month, and a surgeon, in that part of the country, advised him to apply a poultice for a few days, and afterwards to dress the external sore with ung. basilic. He continued however to observe these instructions, without benefit, till he came to Edinburgh. On examination, I found two small openings discharging thin acrid matter in great abundance. I introduced a probe, which passed easily forward over the anterior surface of the trachea, forming a cavity of considerable extent. By dissecting off the integuments, I laid the sinus completely open, and thus an ill-conditioned sore was formed, extending three inches across the fore part of the neck, and one and a half from above downward. I prescribed tinct. cantharid. ℥j, aq. font. ℥vj. M. A small wine glass-full to be taken thrice a day. This mixture was repeated on the 27th, when he informed me, that he felt a more frequent inclination to void urine than usual, and when this operation was over, slight pains troubled him for some time about the neck of the bladder. The cantharides were therefore continued.

29th. He now complained of stiffness in the sore, which appeared somewhat inflamed, but the nature of the discharge was unaltered, and the pain in voiding urine as formerly.

Jan. 6th. Since last report, he has kept the urinary organs slightly affected by the use of the cantharides, and now the discharge is puriform, and the sore is very painful. I this day removed several portions of loose skin about two lines in breadth round the edge of the sore. He complained

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plained of great pain during this operation, and the wounded surface bled freely. The cantharides were still continued.

12th. Granulations, very exuberant and somewhat elevated above the sound parts, now appeared; I therefore ordered very moderate pressure to be applied, by means of a pad of linen, and the cantharides to be continued.

18th. In some parts of the sore, granulations elevated above the sound parts continue, in others small ill-looking sinuses are forming, which discharge thin acrid matter, so that at present two states of action, very different in their nature, are going on in the sore. As the sinuses form, I lay them open, and bathe the parts with spt. vini. and apply slight pressure to the other parts. The cantharides were still continued.

Mar. 1. For the last six weeks the cantharides have been continued, several sinuses have been formed, which I have laid open, and other parts of the sore have healed. His urinary organs were now so easily affected, that the smallest dose of the cantharides pains him severely for several hours. I therefore desired him to omit the cantharides, and use as a substitute about a pint of wine per diem, and the sore to be washed with spt. vini. This day he went into the country.

April 3d. He returned from the country; the sores did not look so healthy as formerly, and he expressed a wish to recommence the tinct. cantharid. as the wine produced very uneasy sensations in his stomach. I desired the cantharides to be taken in small doses.

27th. The sore had healed rapidly since last report, and his general health was much improved. The cantharides were continued.

May 20th. The sore was now completely healed, I therefore desired him to omit the cantharides, and anoint the tender surface with axung.

June 1. Two or three small pimples, containing thin matter, had appeared on the recently healed surface; I therefore desired him to recommence the cantharides in small doses, and the parts to be washed with spt. vini.

8th. The surface now was completely skinned, and a beautiful plexus of tender blood vessels were observable all over the formerly diseased surface. I desired him still to continue the cantharides for a week.

August 13th. This patient continues perfectly well, and the livid appearance, which formerly occupied a considerable space, has now nearly assumed a healthy aspect.

August,

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August, 1808. He continues quite free from his complaint, and the scar is scarcely perceptible.

CASE VI.

June 1, 1807. A boy, aged 11, small in stature, but of a healthy appearance, had till about 18 months ago, enjoyed good health, when, without his parents or himself being able to assign any cause for it, two phlegmonous swellings, about the size of a walnut, made their appearance on the outside of and rather below the elbow joint. They broke, and the discharge, which was small in quantity, was of a thin consistence. He applied to the Royal Infirmary of this place, where he was ordered to dress the sores with the calamine cerate of the shops. He continued this application three weeks without seeming to derive any benefit from its use, when another phlegmon made its appearance three inches farther up the arm than the former, which likewise broke, and discharged matter of a similar consistence. The same kind of dressings which were employed in the other sores, were likewise applied to this.

About the beginning of September following, he received a kick from a horse on the fore part of the ankle joint; this was followed by considerable swelling of the under part of his leg, which in a few days terminated in a phlegmon near the ankle joint. This broke and discharged matter similar to what was discharged from his arm, and the motion of the joint was considerably impeded. He was desired to apply poultices around the ankle, and over the sore, but from them he derived no benefit, although he continued their use for several weeks. He now began to suffer considerably in his general health, and another sore of a similar nature to the last, rather more toward the outside of the leg, appeared. Sea bathing, with a great variety of dressings, were employed, but from these he derived no benefit.

He applied to me the 1st of June, 1807. His general appearance at that time indicated considerable debility. The above mentioned sores looked remarkably unhealthy; those on the leg, in particular, had thick callous edges, and the ankle joint was considerably enlarged and stiff. He walked on the point of his toes, and kept his knee joint constantly bent, because he could not stretch it without occasioning great pain in his ankle joint and in the sores. The flexors of his fore arm were so much contracted as to cause the fore arm to form a right angle with the humerus.

As

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As none of the glands of any part of his body seemed preternaturally enlarged, and as the sores, which were evidently of a scrophulous nature, seemed in their general character similar to what I had treated successfully with the cantharides, I prescribed tinct. cantharid. ʒij. aq. font. ℥vj. M. A table spoonful to be taken thrice a day, and all the sores to be dressed with simple ointment.

June 2. Another sore, nearly of the same character, broke out on the same arm, a little below the former. From this, however, was discharged a great quantity of bloody mixed matter.

4th. A sort of bag, seemingly containing watery matter, appeared to rise from one of the sores near the ankle joint, which broke this day, and discharged a considerable quantity of watery matter. He now felt much pain in voiding urine, which he was inclined to do very frequently, and a sort of darting pain in the situation of the kidneys. I therefore desired the cantharides to be taken in diminished doses.

8th. For the last three days he has taken only three tea spoonfuls of his mixture daily, on account of the great pain he felt in voiding urine. The sores were now more painful, and the discharge from them more thick in consistence, and whiter than he had ever observed it; the swelling too on the foot and ankle joint had abated considerably.

13th. The sores had all become very painful, particularly the large one on the front of the foot, and all of them discharged healthy pus. He continued to pass his water very freely; the cantharides were therefore continued.

16th. There had been very little discharge from the sores on his arm for several days, but those on his legs continued to discharge freely, and the swelling on the foot and ankle joint had completely disappeared. He had felt very little pain from his medicine, I therefore desired him to take an additional tea spoonful per diem.

20th. The pain in voiding urine again became very troublesome, also pain extending along the whole leg, with a considerable degree of swelling. The sores, however, which are very painful look well, and the discharge from them is very good. The cantharides were discontinued for a few days.

21st. A phlegmonous swelling had appeared on the forepart of the leg since yesterday, to which I ordered a poultice to be applied. The general pain all over the leg had abat-

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abated, but the urinary organs were still considerably affectedb y the cantharides.

25th. Poultices were constantly applied to the tumour, till this day, when distinct fluctuation of matter was felt in it, and it was laid open. There was discharged from it a great quantity of blackish fœtid matter. After this a poultice was applied to the wound; I desired him to recommence the cantharides in small doses.

27th. The last mentioned wound seems very deep and black, I therefore desired spt. vini. to be injected into it twice a day, and cantharides to be continued.

July 1st. All the sores now looked well, and the swelling mentioned on the 20th ult. had disappeared completely. The canth. were still continued.

6th. A small tumour had appeared within two inches of the phlegmon last mentioned, which broke during the night, and discharged a small quantity of bloody matter. The cantharides were now continued in increased doses.

14th. The sores all looked very healthy, and the discharge from them was good, and in moderate quantity. I desired him to dress them with simple ointment. He continued to void urine freely, and the cantharides were therefore continued.

24th. The sores on the foot were evidently beginning to heal, and those on the arm to look clean and healthy. The cantharides were still continued.

28th. All the sores were now healing very fast, some of the smaller ones were indeed completely skinned over. His general health too was greatly improved, and he took his victuals remarkably well.

Sept. 1st. Adhesive straps and roller were applied to the sores, both of arm and leg, and the cantharides were continued.

12th. Almost all the sores had healed, I however ordered the adhesive straps and roller to be still applied.

Oct. 3d. All the sores had completely healed, I desired nevertheless the roller to be continued, and the cantharides also in small doses for a week or two.

16th. A phlegmonous swelling appeared on the anterior part of the ankle joint, to which warm poultices were applied, and on the 22d it broke, and discharged about a table-spoonful of matter of a thin consistence. The cantharides were continued.

Nov. 1st. The sore was now completely healed, I however desired the cantharides to be continued in small doses, and the roller to be constantly applied.

25th. This

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25th. This patient continued in perfect health, and all the sores were healed. The cantharides and roller were still continued.

Dec. 20th. He refused to take any more of that medicine.

Jan. 2d, 1808. A small tumour with an inflamed base appeared on the posterior part of the wrist of the arm, which was formerly affected. I desired poultices to be applied to it, and the recommencement of the cantharides.

20th. The tumour was opened, and discharged matter of a better consistence than any of the others, which were formerly opened. The edges of the sore were hard, thick, and inflamed to some extent round its base. I still desired poultices to be applied, the cantharides to be continued, and spt. vini. to be daily injected into the sore.

No new sores afterwards appeared, and, by a continuance of this plan, the above one was completely healed in less than three weeeks. I however desired him to continue the cantharides in small doses for two or three weeks longer.

August, 1808. This patient continues perfectly well, and has, since the removal of his complaints, become much stronger than ever he recollects having been.

This case was principally attended to by Mr. John Lizars, apprentice to Mr. John Bell.

CASE VII.

A wood-cutter, aged 24, stout made, was, about seven years ago, affected with scrofulous swellings in several parts of his body. Only those however of his neck suppurated and broke. He applied to me the 22d of April 1806; and as it may be of some importance to convey to the reader an idea of the general appearance of his disease, I shall attempt to describe it.

On the right side of his head and neck there is one sore, between the sterno-cleido-mastoideus and masseter, extending from the lobule of the ear to the angle of the inferior jaw, and discharging matter by two orifices. A second sore, commencing about an inch from the former, is situated on the cheek, its upper edge being opposite the termination of the parotid duct, itself extending downwards, uniting with another sore under the maxilla, and stretching along in that direction. These discharge matter by four orifices. Another sore is situated between the trapezeus, and sterno-cleido mastoideus, and extends across the inferior extremity of the platysma myoideus to the sterno-hyoideus. A very

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very large sore extended from the inferior edge of the thyroid gland, over the sternum to the insertion of the second pair of ribs, and was covered with scabs on this side. There is also a sore running across under the chin, which unite the sores on opposite sides.

On the left side the sores were much more extensive than on the opposite side, and not so capable of the same distinct description. They seemed however to form three lines, one commencing behind the mastoid process, extending downwards till near the acromion. The second from behind the lobule of the ear to the anterior half of the clavicle; and the third from the zygomatic process of the temporal bone, over the masseter and upper part of the platysma myoides, joined as above described, with the sores of the opposite side. The matter was discharged here by numerous orifices, and approached somewhat to the appearance of laudable pus. His neck is in general very much enlarged, it being at least equal in circumference to any part of his head.

The axillary glands are but slightly enlarged, but all the glands in both groins, along the course of Poupart's ligament, and extending down upon the inside of the thigh, were universally enlarged.

The disease began by the sore above the trachea, which broke about five years ago, after having been in a diseased state full two years; and all the other parts mentioned about the neck becoming also affected, broke three years ago. The whole neck and face continued more or less swelled. The general health however continued all the while pretty good, except from to time severe pains in the bowels affected him, which were eased by the discharge of flatus downward. He does not recollect if he was at these times costive.

When he applied to me, he complained of loss of appetite and sickness, in consequence of which he had been unable to work at his trade for several months. From the general tendency to glandular swellings in this case, I conceived it more prudent to employ the solution of the muriate of lime than the cantharides, as in several cases of very large glandular swellings, I found this medicine, when used in large doses from ʒiv. to ℥j. per diem of the greatest service. I know that this valuable medicine, like many others, has been nearly consigned to oblivion, from an idea propagated by men thought to be eminent in their profession, that it is possessed of no useful quality; but this is not very uncommon in our profession, for, unassisted by reasoning of any

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any kind, one medicine after another has been applauded, has retained its popularity for a length of time, and, as might be expected, has at last been completely neglected. Not that the medicine wanted power, but that its employers wanted judgment. I prescribed this medicine to be taken at first in doses of ℥ß per diem, to be gradually increased. I at the same time prescribed as tonics Peruvian bark and rub. ferri, to restore the appetite and promote digestion, desiring the ulcerated parts to be bathed with warm sea water, and dressed with simple ointment.

May 30. I prescribed the following solution to wash the sores, sulph. cupri ʒß. aq. font. ℥vi. M. f. solut.; muriate of lime continued. This day there is a tumour, which began two days ago, situated over the jaw, and directly under the dens caninus. It is now as large as a walnut, and completely filled with matter.

June 7th. This tumour has shrunk and nearly disappeared without any external opening, and the fluctuation of matter is scarcely to be felt in it. The sores have a more healthy appearance than he says they have had since the commencement of the disease. No new swellings or sores have broke out since he began to take the muriate, and he is now able to work at his trade, is free from sickness, and takes his victuals well.

29th. I repeated the mixture as formerly, the patient still continuing to get better.

July 11th. The swelling of the glands were greatly removed, but this day the ulceration was worse, and very universally spread all over his neck, for the most part in small distinct pustules, discharging thin white matter. I then determined to give up the use of the muriate, and try the cantharides, which I had hitherto declined doing on account of the swelling of the glands; but, as he was obliged to return to the country before he could arrange matters to stay in town during its use, he therefore did not begin to take it till this day, August 9th.

The sores still discharging unhealthy matter, and there is a tumour the size of a walnut almost above the trachea, in which matter evidently fluctuates. I prescribed tinct. canth. ʒß. aq. font. ℥vi. M. A table spoonful to be taken four times a day.

He continued to use this mixture without any perceptible effect, till the evening of the 19th. While in bed he felt intolerable itchiness all over his body, and on examining his skin, he discovered blotches of the size of a shilling

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completely covering him, and appearing as if he had been stung by nettles.

18th. He informed me of the above circumstance on the evening of this day, when the blotches had almost all disappeared, and he felt a kind of soreness on several of the parts where they had been. He had taken none of the mixture since last night, being terrified lest the blotched appearance of his skin should return. The discharge from the sores was of a thin watery appearance, except in one small spot under the right ear, from which thick white matter was discharged, in greater quantity than was poured out by any other of the sores of a similar size. No effect had been produced on the urinary organs. The tumour mentioned on the 9th broke this morning, and discharged thin matter. I have ordered him to poultice it, to recommence the cantharides and repeat the mixture with ʒvj. of the tincture.

15th. No effect was produced by the cantharides on the urinary organs; nor had the blotches troubled him again. Several of the sores discharge thin, others thick, white matter; formerly they all discharged thin ill conditioned matter: the discharge is likewise increased in quantity, and, such is the nature of the sores, that if pressure be made on part of his neck, formerly described to be in a diseased state, matter of different colours and consistence can be squeezed out as if from a sponge; yet a probe passes but a very small way into either of the openings. I desired four table-spoons full of the last mixture to be taken per diem, and dressings of simple ointment to be used.

19th. The probe went much easier into the openings than yesterday. In one situated over the parotid gland, I could introduce a probe nearly an inch all round, and there was discharged from it thin matter in considerable quantity. He was now very timorous, and would not submit to have it laid open. Several of the sores however were completely healed. Some still discharged thin, some thick matter, and there were several small papulæ with white tops on several parts of his neck, which never were seen before. No effect was produced on the urinary organs, I therefore desired the cantharides to be continued in increased doses.

20th. After he went to bed last night, there was some pain in his urinary organs, and difficulty in passing water, but these went off before morning. I still desired him to continue the cantharides.

22d. I now judged it necessary to lay open the sinus over

over the parotid gland, but the patient would not submit to it; I therefore declined doing any more for him till he comes to have a more correct sense of his duty.

Sept. 1st. My patient returned to me this morning with a determination to submit to whatever measures I might think necessary for the removal of his complaint. The discharge from all the sores had become thin, and, from some of them, it was perfectly limpid. I found the formerly mentioned sinus over the parotid gland considerably enlarged in extent since the 22d, and I made an opening from the uppermost to the most depending part of it, in length 2 ½ inches. I opened another about 3 inches in length, in the direction of the sterno-cleido mastoideus. I likewise opened several smaller sinuses, extending two or three lines immediately under the integuments of the neck. I filled all of these with lint dipped in sp. vini. and ordered him to recommence the use of the tinct. cantharides as follows: R. Tinct. canth. ℥j. aq. font. ℥vi. M. A table spoonful four times a day.

3d. The discharge was now thicker and the sores looked a good deal inflamed, but no effect was produced on the urinary organs. He complained of stiffness and soreness when he attempted to move his neck. I therefore desired him to continue the cantharides.

4th. He repeated the mixture as formerly, but complained of no pain or difficulty in voiding urine. The sores now discharged good pus, and in moderate quantity. I ordered the cantharides to be continued.

6th. He felt some difficulty and pain in voiding urine, but it soon went off, and the cantharides were continued.

7th. I opened several small sinuses about two lines in depth. All the sores now discharge healthy pus, and appeared considerably inflamed. I ordered the mixture to be repeated, and to be taken in sufficient doses to keep up slight difficulty in voiding urine.

11th. Since I saw him on the 7th, a tumour about three inches in circumference, immediately above the angle of the jaw on the right side, has been formed. I opened this, and there was discharged from it healthy pus. He complained of stiffness and soreness in attempting to move his neck, and all the sores discharged healthy pus: several of them have even healed since last report. I desired the mixture to be repeated with ℥iß of the cantharides, and in increased doses, as he felt no effect on his urinary organs for two days.

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15th. I laid open a number of small sinuses on the right side of the neck, and one extending along the whole anterior edge of the sterno-cleido mastoideus. I ordered the cantharides to be continued.

17th. The discharge from the last opened sinus was now very profuse and healthy; the sores were of a florid healthy appearance; and he felt stiffness and pain on moving his neck. He has felt slight difficulty in voiding urine. I, however, ordered the cantharides to be continued.

20th. He had taken an ounce of the tincture per diem since the 15th, and had felt only slight difficulty in voiding urine. The sores on the right side of the neck were now healing very rapidly, and discharging a very moderate quantity of healthy pus. On the left side of the neck I found a very extensive sinus, somewhat similar to the one above described, but I declined laying it open till some of the sores on the other side should heal. The cantharides still continued.

27th. The extensive sore laid open on the 15th, was now nearly healed. But while some parts of the other sores are healing, other parts of them do not look so healthy. I desired them to be dressed with ung. nitrat. rub. The cantharides continued to produce slight effects on the urinary organs, the dose for some days past having been ʒiv. per diem.

Oct. 1st. The sores were healing very slowly; I therefore desired nourishing food to be taken, and the cantharides to be continued.

8th. An indolent tumour, the size of a pigeon's egg, which for some years past had existed in one of his axillæ, became painful, and I have ordered him to discontinue the cantharides, and apply to it at first leeches, and then cold solutions, while at the same time he took a smart cathartic. The sores still inclined to heal slowly.

16th. The above application seemed to have very little effect in allaying the swelling, for it this morning broke, and discharged a great quantity of mixed matter. As there was no perceptible swelling of the gland, I desired him to recommence the cantharides, and to apply warm poultices to the axilla. The matter discharged from the sores in the neck had evidently become thinner within these few days, but, upon the whole, his general health is very good.

22d. Dry hard scabs now formed on several of the smaller sores, which, in one or two instances, I removed, and found

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found a collection of thin matter under them; I therefore in future shall endeavour to prevent their formation. The cantharides were still continued.

30th. I laid open the extensive sinus on the left side of the neck, and bathed it with sp. vini. The other sores continued to discharge healthy matter, and are healing slowly. I desired 3ij. of the cantharides to be continued per diem.

Nov, 10th. His neck, which before was much deformed, and greatly enlarged, had now nearly its natural shape and thickness, and, except the last opened sinus, all the most important sores had healed. There were however, several small pustules scattered over the formerly diseased surface, discharging healthy matter. I ordered 3ij. of the cantharides to be taken per diem, and gradually and slowly diminished.

Dec. 20th. Nothing now remains of the above disease, but a few pustules, which alternately heal, and are formed on different parts of the formerly diseased surface. I ordered the parts to be daily bathed with sp. vini. and 3j. of the cantharides to be taken daily. He was now in as good health, and was as capable of working at his trade as ever he was before the disease affected him.

Feb. 12, 1807. As the sores had now been completely healed for two weeks, and only a sort of stiffness remained in the neck, I desired him to take no more of the cantharides, and when the weather permitted to use sea-bathing.

Aug. 1808. This patient remained perfectly free from his complaint, having had no eruption or sore on any part of his body for more than a year.

This patient is at present—a servant of Lord Hopetoun's.

The cases which I shall next month communicate to the Journal, will be those of affections of the generative organs of both sexes, generally treated by the same medicine. There may exist similar cases in the writings of medical authors, but I have not met with any such; and the plan of treatment which these indicate, has been in every instance successful.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE disease recognized by the terms Exomphalos, and Hernia Umbilicalis, is one of frequent occurrence, and sometimes is productive of considerable trouble to the practitioner.

In my remarks I shall confine myself chiefly to the cure of this disease in the infant subject, as surgeons are, I believe, pretty well agreed that umbilical hernia is a disease scarcely admitting of radical cure in the adult. However, if it be possible to effect it, the method now submitted to the public appears most likely to forward that event. For the cure of exomphalos in the young subject, two methods have been recommended. The ligature applied round the integuments, so as to produce sloughing; the protruded visceral contents being previously returned into the abdomen. And the application of a compress to the navel, supported by a bandage applied round the body. It may not be incorrect, just to notice the merits and defects of the two plans of cure.

The former has had its advocates amongst the ancients, and some of the moderns appear to favour it; some French surgeons have used it with considerable success, and we are taught to believe, there is no danger in this method of treatment: but whoever considers the operation of this remedy, must be well aware that it produces considerable inflammation, and we know that to excite inflammation in membranes lining the cavities of the abdomen, the thorax, &c. is not free from danger; it likewise often happens that inflammation once produced on such parts, runs to an extent at once dangerous to the patient, and harrassing to the practitioner. But we will suppose the ligature is productive of no inflammation beyond what we are taught to expect, it *must* be attended with severe *pain* for ten days or longer, from which irritation it would not be at all unlikely that convulsions, and sometimes even death itself, might ensue.

To the latter method, the only objection appears to be the difficuly of fixing a bandage in such amanner, as to allow freedom of motion to the patient, and at the same time to keep the parts constantly reduced. Various ingenious contrivances have been proposed for this purpose, but these have all been liable to considerable deviations, from the exact

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exact position they should retain to effect the intention of their application: consequently, the cure has been tedious, and has required considerable attention to accomplish it. However, incomplete as it is, this method is in general use, being wholly devoid of both danger and pain.

The plan now submitted to the profession, is one that has uniformly succeeded in a great number of cases, in accomplishing a perfect cure after a few weeks application, is unattended with danger, easy in its application, requires but little attention, and is not expensive.

I first take a piece of adhesive plaster, about 2 ½ inches square; then, the bottom of a pill box, a half crown, or any substance of the same form, in size proportioned to the protrusion, over which I wrap several slips of lint; as thin and round at the circumference, and as convex at the centre of the substance used, as possible, to compress the parts more certainly, and to render its application the easier to the patient; then, the protruded parts are carefully returned into the abdomen, the plaster applied, its centre directly over the navel, and the compress folded as above, exactly on the centre of the plaster. I then take a circular adhesive plaster, large enough to cover the compress, with which I fix it, and over it another and another, each something larger than the preceding, so as to form a conical pad, the point of which presses on the rupture; the whole is then secured by a belt of adhesive plaster, bound with moderate tightness round the body. This belt will require to be renewed once every week, or ten days, but not oftener if the plaster be properly adhesive. For this purpose I have generally used a strip of calico three or four inches wide, and long enough to bind twice round the body, covered with emplastrum thuris, with the addition of a small quantity of resina flava; this I have found to stick sufficiently well, nor have I ever known it to produce the slightest irritation of the skin, or the least inconvenience to the patient. This bandage possesses one advantage over every other before used, in not being liable to the smallest variation of position.

I am, &c.

FRANCIS BUSH,

Member of the Royal College of Surgeons, London.

Frome, August 16, 1803.

On Strictures *of the* Urethra, *with a* Description *of a newly invented* Bougie.

FROM whatever cause Strictures of the Urethra may arise, they are a fruitful source of misery to the patients. A permanent stricture will ultimately produce a diminution in the capacity of the vesica, a thickening of its coats, distension of the ureters, enlargement of the pelvis of the kidney, and even a train of nervous disorders.

The dissections of Mr. John Hunter and others, inform us, that the part where a permanent stricture exists, is more indurated than the rest of the urethra; in some it seems cartilaginous. This cartilage does not usually line the whole circumference of the urethra, but appears sometimes on one side, sometimes on the other, and the urethra is generally contracted on that side: its colour is white; it is often situated at the bulb of the urethra, and this primary stricture at the bulb, seems to induce them in other parts of that membrane. A stricture may be known by the resistance it makes to the bougie, and by the difficulty and pain in voiding urine, which is expelled in a small, divided, or flat stream, or by drops. Its uniform tendency is to diminish the calibre of the urethra, and it is generally accompanied with a gleet.

If it is admitted, that the virtue of the bougie arises from its mechanical power, operating as a wedge, it is desirable to adopt that form of the instrument, and that mode of its application, from which the greatest benefit may be derived. The wedge is one of the greatest of the mechanical powers, and since, to overcome strictures, we are compelled to resort to mechanical aid, it is happy that we have so great a power at command, which it is desirable to apply with the best advantage. Surgeons have hitherto contented themselves with applying the single power of the wedge; by a combination of this power, however, the effect will be much increased to overcome the resistance of strictures. But first let us offer some objections against the common bougies.

The adhesive substances, resin and wax, of which the common plaster bougies are composed, render them but ill adapted to enter the urethra, especially in that part contracted by stricture.* Every practical mechanic knows

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* We need not remark to our readers, that the objection against the adhesive properties of the plaster bougies is readily obviated by the oil with which they are smeared before their introduction. Editor.

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that a wedge ought not to be made of adhesive substances; neither should an inclined plane, or conical wedge, which is intended to enter a stricture and overcome a resistance, be made of cloth; a harder substance is required; a cere-cloth bougie is also improper, because it frequently happens, that a spasm of the urethra takes place after the bougie has passed the stricture. We have known this spasm to occur, when two or three metallic bougies (which are much less irritating) of diameters progressively increasing, have been passed successively. The spasm arose from irritation of the lacunæ, or from irritation of that part of the urethra, where the primary stricture was situated. In this case of spasm the bougie is embraced so hard, that it is not easily withdrawn, even if made of firm metallic substance.

Much has been said in favour of bougies made of elastic gum, but we shall see that it is an expanding bougie that is wanted to dilate a stricture; such a one as will expand gradually by an enlargement of its circumference. In strictures we have found elastic gum bougies of only temporary use, little permanent benefit was to be obtained from them.

With regard to bougies armed with caustic, according to the method of Mr. John Hunter and Mr. Home, it may be observed, that when a caustic is applied to the urethra, it burns the sound as well as the diseased parts. So that, upon the whole, the cure of strictures by dilatation is attended with less hazard to the urethra, and is more mild and agreeable to the patient, than the cure by the caustic, however some may differ in opinion.

Mr. Smyth's * metallic bougie, though superior to Daran's plaster bougie, by producing less friction, yet in common with Daran's, possesses but the single power of the wedge. We are not yet authorized to attribute its virtue to Galvanic principles, any more than the virtue of Daran's medicated bougie to the ingredients of which the plaster was composed. Probably, both derive their efficacy from their simple mechanical power of dilatation.

Having premised these observations on the bougies in common use, we proceed to describe one of a different construction, with its application. It may be called an expanding or spring bougie, since it operates by dilatation like a pessary, at the same time it has the texture and firmness

* Late of Tavistock-street, Covent-garden.

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firmness necessary for such an instrument. Take any metal possessing the requisite strength, together with ductility and elasticity, as steel or silver, and let a hollow bougie of the usual form, about ten or eleven inches in length, be formed of the middle size. It should be made rather larger towards the handle. Let the external surface be polished, and let it be curved in the form of the male catheter; a lateral section may then be made on the convex surface of the bougie, and continued almost its whole length; the section should terminate within three quarters of an inch of each extremity. Introduce the bougie into the urethra, and pass the stricture; after it has remained an hour or more in the urethra, introduce a stilet (made of strong and elastic wire, with a spherical bulb, well secured at its extremity) within the hollow bougie. The diameter of the sphærule, at the extremity of the stilet, should be rather larger than the diameter of the bougie in the middle part, and rather less than the diameter at the handle. Thus the stilet will easily enter the hollow bougie, and being gradually thrust forward, will force open the lateral section, and cause an *expansion* of the bougie, and of course a *dilatation of the stricture.* When the stilet arrives at the stricture, it may be retained in that situation about an hour, when it should be withdrawn. Another stilet, with a spherical termination of a larger diameter, may next be introduced, and being pushed down to the stricture may remain there another hour. This will cause the hollow bougie *still more to expand,* and will produce *a greater dilatation of the stricture.* This may be considered as No. 1, of the bougies. There will be little difficulty in introducing the stilet, if the hollow bougie be well oiled within, the friction between the two metallic substances being less than the friction between a metallic substance and the membrane of the urethra, as is proved by the difference of passing bougies and catheters through strictures. When a stricture is once overcome, and a bougie with difficulty is introduced, it is desirable to make all possible advantage of the operation, and by no means to lose ground which has been gained with so much difficulty. This advantage is in some degree lost, every time a bougie is withdrawn by the re-action of the stricture, an inconvenience which is obviated by the above contrivance.

The bougie, No. 2, may likewise be made hollow, of the same materials, and in the same form as No. 1, only larger, and having two lateral sections opposite each other, on the surface through the metal, extending nearly its whole

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whole length; the sections terminating within three quarters of an inch of each extremity. To this bougie may be fitted, in like manner, two or three stilets, having spherical terminations of different diameters, each progressively exceeding by a little, the diameter of the middle part of the bougie, and rather less than the diameter of the bougie at the handle; or the instrument may be constructed with one stilet, having little globular bodies (of different diameters in the proportion described) screwed on its extremity.

When the stricture is sufficiently dilated by the bougie, No. 1, with its stilets, the patient may proceed to the use of the bougie, No. 2, which may be applied in like manner. When the bougie is once introduced, it should remain several hours, as the longer the urethra is kept distended, the greater is the probability of a permanent cure. When you mean to withdraw the bougie, the stilet should be previously withdrawn.

The bougie, No. 3, is likewise made hollow, of the same materials, and in the same form as No. 2, only larger, and having three lateral sections, at equal distances on the surface, extending near its whole length, and terminating within three quarters of an inch of each extremity. To this instrument three or four stilets may be fitted, with spherical bulbs, progressively increasing in diameter, or one stilet may be used, having spherulæ of different diameters, screwed on as occasion may require.

When the stricture is sufficiently dilated by the bougie, No. 2, with its stilets, the patient may proceed to the use of No. 3, which may be applied in like manner; the spherulæ being progressively augmented in diameter, until dilate the urethra gradually to the size required; when the object will be gained, and the stricture overcome.

The largest of the spherulæ must be of such diameter, as when introduced within the bougie, the bougie, thus dilated, shall but litle exceed the average size of the adult urethra in a state of health. From hence the diameters of all the spherulæ may be inferred.

We have hitherto described the bulb of the stilets as spherical, but the surgeon need not confine himself to this form, a conical or cylindrical bulb may, if preferred, be made and screwed on in the same manner. Its axis must be short, on account of the curvature of the tube through which it is to be passed. If little cones or cylinders be substituted instead of spherulæ, the diameters of their bases must of course be equal to the axis of the spherulæ,

Some

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Some may suppose a conical bulb attached to the stilet, preferable to those of a spherical or cylindrical form; but when we consider the bougie as embraced hard by the stricture, and a sphere of superior diameter within the bougie pressing against it, it is evident that the form of the bougie in this part, will become nearly conical, and that this is the form required to dilate the stricture. We mention this to shew, that whatever may be the form of the end of the stilet, its effect, when duly applied within the hollow bougie, is much the same, viz. to transform that part of the bougie, which is near the stricture, and which is almost cylindrical, to a conical figure.

A bougie, constructed on the above principles, having strength sufficient to be thrust forward and withdrawn at pleasure, at the same time when lodged within the stricture, admitting of a gradual expansion by the introduction of the stilet, possesses a combined or double power of the wedge. When the bougie and first stilet are within the stricture, if a second and third stilet could be introduced within the first, so as to give a still greater expansion to the bougie, the powers of this instrument for dilating strictures would be augmented. But we despair of seeing this reduced to practice. Could we proceed by introducing successively wedge within wedge, in a curved bougie, without being under the necessity of withdrawing the first, such an instrument, if it could be invented, might be considered as the ne plus ultra; a triple, quadruple, or higher power of expansion would be obtained, and the stricture might be very speedily dilated; but perhaps this would render the instrument too complicated; moreover, such a sudden dilatation might occasion pain not to be endured, and if such an instrument should be invented, it might not be proper to apply it. We may therefore for the present rest satisfied, in obtaining by the above described instrument, a mechanical power of the wedge, which is double the power that is obtained by other bougies.

This double power of wedge within wedge, is well adapted to overcome the obstinate resistance which a stricture makes. When once the hollow bougie, No. 1, of the smallest size, has penetrated through the stricture, a permanent cure may with good reason be promised, by perseverance in its use, together with the other numbers and their stilets; whereas, from bougies which possess but a single power, the patient is apt to relapse, which has brought the common bougies into discredit. With the expanding or spring

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spring bougie, we may be sure to effect in this disease whatever can be done by dilatation.

Bougies were originally made solid, of lead and other soft metals, but these are not proper to make the hollow expanding instrument here described, as they do not possess the requisite elasticity; they would therefore retain the form given them by the stilet in its introduction, which would be inconvenient in withdrawing.

With regard to the degrees of expansion, the instrument may be so constructed, as that the bougie, No. 1, may be made to expand one-third, No. 2 also one-third, and No. 3 one-half of their respective circumferences, though the artist is not limited to these proportions, but may vary them according to his judgment. The maximum of expansion will depend upon the elasticity of the metal, as the spring of the instrument should not be injured by forcing into it stilets of too great diameters. When expanded to their utmost limits, these bougies are much less painful than the plaster bougies of the common size. Patients have often made this remark.

The reason why the bougie, No. 1, is constructed with but one lateral section is, that the instrument being supposed small, two sections through the metal would diminish its strength in too great a degree. It may, however, be made like No. 2, if this form is preferred.

Whether the surface of the diseased urethra be cartilaginous, ligamentous, or muscular, strictures of the urethra are evidently spasmodic, from the ease with which a bougie shall sometimes pass, and after being retained a short time from the difficulty of withdrawing it. But though a spasm should seize the urethra after the introduction of a bougie, this spasm may be useful from the subsequent relaxation and debility.

Cloths wrung in hot water and applied to the perinæum will facilitate the introduction of the bougie, and as it is frequently troublesome to introduce a large bougie, it is recommended that when once introduced, it should be suffered to remain for hours, introducing the stilets successively, and allowing them to remain in that part of the bougie which passes through the stricture, a proportional time. The stricture is thus doubly expanded without withdrawing the bougie, which is an advantage that no instrument of this kind heretofore in use possesses. If however the patient be limited as to time, the continuance of the bougie and stilets in the stricture may be proportionably shortened, to suit his convenience.

Some

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Some may suppose, that Daran's plaster bougie when long in the urethra swells, and becomes enlarged from imbibing moisture. To this it may be replied, that the resin, oil, wax, and litharge, of which it is composed, prevent the cloth from imbibing moisture. If these substances should be worn off, the cloth being confined in the stricture, nearly surrounded by a cartilaginous substance, and perhaps acted upon by spasm, at the same time will expand but little in such a situation. If the cloth bougies expands in any part, it will be beyond the stricture or before it, parts which are not required to be dilated. Where the stricture is situated, the cloth will admit but of little expansion. Hence the reason why a permanent cure is so difficult to be made by a common bougie.

It is evident, that in those cases of stricture where the induration and contraction are on one side only of the urethra, when a bougie is forced through this strait (if it may be so called) of the urethra, it will dilate principally the sound side, leaving the diseased part as before. Hence the aptness of the disease to return. This objection to the method of cure by dilatation is common to all bougies.

When the cure of strictures is attempted by bougies armed with caustic, the caustic may not be applied to the diseased part, and the escar or corrosion being made on the sound side, causes a more serious injury to the urethra than simple dilatation would produce. But many cures of stricture have been made by dilatation only, where the bougies are properly applied, and the patient perseveres in their use. It is needless to multiply cases.

The bougies should be introduced daily, and the patient should continue their use some time after all the symptoms of stricture have subsided. During the use of the bougies, the diet should be reduced; the patient should abstain from spices, salted and seasoned provisions, wine, and ardent spirits. His drink should consist of mild gelatinous fluids. Sour and austere fruits should not be eaten, but those of a saccharine or subacid quality, as oranges, &c. will be beneficial. The bowels should be kept regularly open, and exercise (but not on horseback) should be daily taken.

Though bougies usually are and ought to be made in some degree conical, yet if the hollow bougie, No. 1, which has but one lateral section, be made too much so, and the stilet be thrust forward incautiously, the sphærula may be

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be forced out of its cavity, because the bougie expanding, the lateral section of the cone will become wider, as the sphærula approaches its vertex; hence the form of the bougie should be nearly cylindrical, by which such an accident will be prevented.

When the bougie, No. 1, which has but one lateral section, is expanded by the sphærula within, if it be cut in that place by a plane at right angles with the axis of the bougie, the circle will have its periphery opened and enlarged by a small space, and will be transformed from a circle to an elliptical curve, whose transverse diameter exceeds its conjugate.

When the bougie, No. 2, which has two lateral sections opposite each other, is expanded by the sphærula within, if cut in that place by a plane at right angles with the axis of the bougie, this section will form two opposite semicircles, separated by a space from each other.

When the bougie, No. 3, which has three lateral sections at equal distances is expanded by the sphærula within, if cut in that place by a plane at right angles with the axis of the bougie, this section will form three arcs of a circle of 120 degrees each, separated by intervals.

Tubes constructed on the above principles, with lateral sections, that they may expand on the introduction of stilets, may be applied to strictures of the œsophagus, as well as the urethra, and will be found to succeed in all cases where a gradual dilatation is required, as in gunshot wounds, &c. Where the ball passes in a right line, making a wound of a deep and tubular form, the bougie for dilating such wound should be made with lateral sections, on principles similar to those above described. This bougie, however, not being curved like that for the urethra, of course does not require a stilet of wire with a bulb to dilate it; but it may be dilated in a superior degree and more perfect manner. To this rectilinear bougie, (having four or more lateral sections at equal distances, terminating within half or three quarters of an inch of each extremity) may be adapted three or four hollow bougies of the same kind, whose diameters are progressively augmented. These may be introduced successively one within another, the lateral sections enabling the lesser bougies to expand, that they may receive the larger; or if such a sudden dilatation be not required, the bougies may all be made of the same diameter, when, being introduced one within another, a more gradual expansion takes place, and thus any degree of dilatation may be produced,

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duced, without the painful operation of withdrawing and inflaming the sides of the wound by the introduction of fresh bougies; which method of alleviating the pain in dilating gun-shot wounds, is not unworthy the attention of surgeons. This rectilinear bougie possesses the combined mechanical power of wedge within wedge in its full extent, which cannot be obtained in so great a degree in a single bougie intended for the urethra, on account of its curvature. This curvature of the urethra obliges us to multiply the number of the bougies, and to substitute the stilets of flexible wire.

MEDICUS.

London, Oct. 1, 1806.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN a late Number of your Journal, my attention was naturally called to a communication by Mr. Warnock, "Assistant Surgeon of the Royal Navy," on the Treatment of Ulcers at Sea. He there states, that the practice of applying adhesive straps, is extended to all kind of ulcers, in all their stages, by the Practitioners in his Majesty's Navy. Now, as such a practice would carry ignorance and absurdity in its very front, I have thought it my duty to clear the practice of my brother officers from such an imputation.

To suppose that an *Assistant* Surgeon has drawn the statement, "that the unlimited use of adhesive straps in ulcers, is adopted throughout the generality of Men of War," from actual observation, would be to presume too much. That the practice he speaks of is not *universal*, I can state from my own experience; while I have very good authority for affirming, that it is not more generally or indiscriminately adopted in the Navy than on shore.

We have very great reason to distrust the sweeping assertion of Mr. W. "that" by far the majority of ulcers on board of a man of war *partake* of a scrophulous taint, or *are* attached to scorbutic patients, since we know that scurvy is now a very rare disease, especially on home stations.

That the compressing a deep ulcer, which discharges much matter, will occasion inflammation, and force the matter

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matter into the yielding cellular membrane, none will doubt; but many will certainly be surprised to learn, that Naval Surgeons are so blindly ignorant as to adopt such practice.

Had Mr. Warnock, (if he was determined to see his name in print) been content with publishing a single case, illustrative of the ill effects of this practice, *on board his own ship*, he might have had our praise, or at least, would have escaped our blame; but when we see one, the consideration of whose rank must convey to our minds the inexperience of youth, boldly accuse a most respectable body of gentlemen of depriving their country of the protection of its defenders, we can scarcely refrain our indignation at such unprincipled rashness.

I am, &c.

JACOB SMELLIE,
Assistant Surgeon.

H. M. S. off Brest,
Aug. 23, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the last number of the Medical and Physical Journal, Dr. Beddoes and Mr. Smith, have related two cases of Hydrophobia; in one of which, caustic was applied to the bitten part the day following the injury; in the other, two days after; and in both without success. Discouraging as the event of these cases has been, I should not hesitate, in similar circumstances, where excision had been refused or neglected, or where it could not be employed with safety, to recommend the most speedy removal of the wounded part by an active caustic.

Every instance of preservation from Hydrophobia, after the bite of a rabid animal, that is made public, must tend to promote the means of preservation; and, where those means have been successful, after a delay of two days from the time the injury was received, the promulgation of the event must give confidence and encouragement to medical men, and induce them to effect the destruction of the bitten part, as the only prophylactic on which they can rely with any degree of confidence. That it does not always afford perfect security, the before-mentioned cases will

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will prove; but, that it may sometimes be so managed, as to preserve life, one of the following instances will attest.

Master Hill, aged ten years, was bit by a dog on the external part of the left heel, on the evening of the 21st of June, 1807. The teeth of the animal had penetrated the cutis in two places, which were immediately washed with brandy, and had a compress of linen wet with the same spirit bound over them. His father gave the following account of the accident. The boy had been accustomed to teize and provoke the dog, which was a fierce creature, and had snapped at him once or twice before. On this occasion, the dog was following a proud bitch, and on the boy coming in his way, he seized him by the heel, and was with some difficulty disengaged from his hold. The dog had never refused food, nor exhibited any symptom of indisposition, madness, therefore, was not suspected, though several mad dogs had been seen in the neighbourhood, and this dog was daily in the streets.

On the morning of the 23d, the dog flew at the maid servant, and bit her on the second finger of the right hand, and in two places on the back of the hand. He had also this morning, torn that bitch he was following when he bit the boy, and likewise two cats, and evinced a strong inclination to bite every thing in his way. The maid came directly to my house, and brought the boy with her. The wounds on her hand and finger, though slight, bled freely. There was now in my mind little doubt of the rabid state of the animal, I therefore urged the immediate removal of the bitten parts, to which the woman consented, and they were carefully cut out. After suffering the wounds to bleed for ten minutes, they were washed with alcohol, and dressed with emplastrum cantharidis spread on dossils of lint. The same treatment was proposed for the boy; but as the father would not consent to excision, or to any other means of prevention till the evening, a caustic of kali purum and soft soap was then applied over the bitten parts, and suffered to remain on all night. This was at least forty-eight hours after the bite. The caustics made deep sloughs on the boy's heel, and as soon as the eschars began to separate, the edges of the ulcers were dressed daily with emplastrum cantharidis on lint.

June 25th. The dog having been alternately howling, and furious, biting and tearing every thing in his way, was destroyed.

July 2d. One of the cats that were bitten on the 23d of last month, seized a girl of eleven years of age, by the leg,

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leg, a little above the ankle, and bit her in four places. The father obstinately refusing to allow the wounded parts to be removed by the knife, they were carefully washed with salt and water, and the caustic of kali purum and soft soap applied to each. The ulcers were dressed as in the other cases.

It is here necessary to observe, that one of the cats died the day she was bitten, of the immediate effect of the injury. The other cat, and the bitch, were shut up, but they got out by the most culpable neglect and inattention. After the mischief was done, the cat was killed, and the bitch secured with a chain.

July 4th. The bitch had a wild and eager aspect, with redness about her eyes. The following day she refused food. On the 6th, her appearance was haggard and miserable, the face of the animal exhibiting a striking and peculiar expression of wretchedness, accompanied with a discharge of ropy saliva from the corners of the mouth.—The next morning she died.

In these three instances a copious discharge was kept up from the ulcers, by the daily application of blistering plaster, for the space of a month, after which they were suffered to heel. During the whole process, the patients took from fifteen to thirty drops of aqua ammoniæ, twice a day, in two or three spoonfuls of water, and, I have the pleasure to add, are now in perfect health.

If it be allowed from this relation, that the dog was rabid at the time he bit the boy, which, I presume, is too clearly authenticated by the subsequent events to admit of doubt, it will follow, that the fact of preservation, after a delay of two days, is evidently made out; and, consequently, that it is our duty where excision has not been performed, to apply an active caustic at any period, and also to promote a free discharge by the daily use of a stimulating application to the ulcerated surface, for at least four weeks.

In the eighteenth volume of your Journal, page 550, is related a melancholy case of Hydrophobia, by Dr. Moseley, in which there does not appear to have been any attempt made to avert the fatal issue; but in your seventeenth volume, page 271, Mr. Hicks details a case, at some length, of recovery after the accession of hydrophobic symptoms. This case, however, has been controverted by some gentlemen, who have contended that it was not an instance of genuine hydrophobia. Mr. Hicks, on the other hand, supports his opinion with considerable ability.

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The case may be doubtful; but if it was hydrophobia, we must surely attribute the cure to the caustic, and not to the fœtid mixture.

I am, &c.

CHARLES ARMSTRONG.

London, Sept. 10, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THE following singular case of a paroxysm of Hydrophobia, which lately fell under my observation, I have submitted to you, requesting you will have the goodness to give it a place in your Journal.

I am, &c.

W. H. LOUDHOUTER.

Flushing, Cornwall.

CASE.

On the 22d of July, 1808, Mr. H. a young man of about 25 years of age, made application to me on account of a violent liver complaint, which had been existing for above six months; previous to my seeing him, he had been under a course of mercury for above five weeks. From the appearance of symptoms at this time, I judged it expedient to continue the mercury, keeping him just on the verge of salivation, and at the same time ordering an opiate at bed time. This plan was continued until the 27th ult. when finding his mouth a little sore, he desisted from the mercurials until the 30th; the 31st he again commenced them. About the middle of this day he complained of a soreness of his throat; on examination I found the uvula and fauces inflamed in a very trifling degree. Supposing this to proceed from a slight cold, caught during the action of the mercury, I ordered him a very slight astringent gargle; during the course of the day, he several times complained of his throat, and that he found some difficulty in swallowing; notwithstanding this, he ate his dinners with apparently the same appetite he did when I first saw him, excepting a depression of spirits, (which I should have observed) had existed for two or three days.

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In the afternoon he complained of a violent oppression of his chest, with an unpleasant titilating sensation in his throat; during the time of my examining his throat he fainted, and remained in a comatose state for about five minutes, when throwing some water forcibly in his face, he instantly recovered himself, and nearly sprung from the persons who were holding him, to catch the attendant whom he saw holding the glass, with the remains of the water in it; however, in this he was prevented; he was then attacked with violent convulsions from the lower part of the thorax upwards to the fauces, foaming at the mouth, with thick stertorous kind of breathing, universally attendant on hydrophobia. In this state he remained fifteen minutes, requiring three men to hold him; he then sunk down totally exhausted, remaining some time in this manner. I applied the usual stimulating applications to the temples, nostrils, &c. Finding these ineffectual, I determined again to have recourse to the cold water, in order to see whether a similar effect to the former would be produced; the consequences were the same, but in a more violent and instantaneous degree; this paroxysm continued about the same time as the first, he then went off in the same manner. The gentlemen around him, who were all strangers to him as well as myself, asked me my opinion of the case; to this, I with some diffidence answered, from the symptoms which we had been witnesses to, I had every reason to believe it to be a case of Hydrophobia.

I had scarce spoke the words, when he aroused from his lethargy, and with a vacant stare looked at every one round him; at length he broke out in the following exclamations, "Jones's young dog has bit me through my boot; it is nothing at all, do not be the least uneasy about it, I am not, but depend upon it I will shoot him the first opportunity; do not be offended." After several violent struggles, attended with a risus sardonicus, he fell into his former comatose state; in this interval, I prepared him an antispasmodic draught of opium, musk, &c. Just as he begun to recover himself, he burst into a violent flood of tears, which appeared to relieve him much, and bring him in a great measure to his recollection. I now thought it a favourable opportunity of offering him the draught, but in doing this the same effect as before was produced. My previous opinion of the case I now thought sufficiently formed, but I had to receive a still further confirmation. Just as he begun to recover himself, as before, he burst forth a second time, "Ponto, Ponto, my dog, why do

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you not come to me? You used to be very fond of me, but now you will not come near me. Jones, the dog has bit me, but I do not care: I shall shoot him! He then threw himself on the pillow, and slept for twenty minutes; when he awoke, he appeared much more collected, but said he had been to sleep all the afternoon, and had had very unpleasant dreams; but we could by no means get from him what they were. On asking him if he would take any thing, he replied, some coffee; this was brought; he appeared startled at the first sight of it, but afterwards took it with an avidity beyond conception; after this, he several times asked for beer instead of water. The first time I got him to take the antispasmodic draught; from this he slept about an hour; when he awoke, he said his throat was much better, he could swallow without difficulty, and complained of nothing but a slight pain in his head; he then took some water in a glass, which he swallowed without difficulty or dread; after this he enjoyed as good a night as he had done for some time, but now and then complained of his head being very hot; his pulse during the whole time were little more than natural; a blister was proposed but rejected; the extreme state of debility he had been reduced to by previous evacuations, and the mercury, forbid the use of the lancet. Antispasmodics were continued every three hours during the night.

August 1. Complains much of his side, but says his head and throat are perfectly well; during the whole day the patient has appeared in a very low melancholy state, but what little conversation he has held, has been perfectly rational. From this to the 31st inst. when he left me, no return whatever of any hydrophobic symptoms had appeared.

From the above statement of facts, I think little doubt can be entertained of this being a case of genuine hydrophobia.

Query.—Had the diseased action of the liver, or the affection of the sytem from mercury, any effect in counteracting the progress of the disease.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the Fourth Number of your Nineteenth Volume, there is a paper of a very singular complexion, signed *Harlestonensis.*

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tonensis. The paragraphs which I select for animadversion, are the following:

"The rage for novelty pervades medical society, in common with others; there is a fashion even in medicine; and it would seem, that it matters not, however absurd and preposterous the opinions of some men are, so that they are but new and singular. I am led to this observation from hearing almost daily, different medicines announced, and highly extolled, in the cure of particular complaints, by men high in the medical world, eagerly taken up by others, and, after a trial, as readily abandoned; thus we have seen Digitalis, Uva Ursi, Lichen Islandicus, Oxydum Bismuthi, Dr. Lambe's Distilled Water, and a long catalogue of et ceteras, fall into disrepute."

The present period may justly be denominated the period of enquiry, and I am persuaded, that that spirit claims a more noble origin, than a "rage for novelty;" it springs from an anxious and laudable solicitude to discover the means of alleviating human evil. The medical men, and the medical publications of the present day, are highly respectable; and in the present state of medical literature, a patient investigation of the truth is a feature very justly conspicuous. This is as it should be; for surely an affectation of singularity should never seize upon a mind contemplating subjects inseparably connected with the happiness and the lives of our species.

If medical opinions be the result of clinical observation, and formed on an extended experience, it is insufferable arrogance to say, that they are "absurd and preposterous." I have no knowledge of your anonymous Correspondent, but from his unqualified censure of his medical brethren, and the instruments they employ in the cure of disease, I am persuaded he is a very young man, and very inexperienced. The period of youth is frequently unreasonably opiniative, or unreasonably sceptical. From the walls of a university men frequently come unbelievers in the art of healing, or they possess the vanity of being able to cure every disease. Time and experience will generally correct both those extremes.

The practice of twenty years will leave no doubt on the mind of a physician, that he can alleviate much distress, and it will also teach him that there are many ills which he cannot cure. The pursuit of curative agents should certainly never be abandoned, so long as there remains a disease to be cured. If this observation be correct, it ought to justify the introduction, and the employment of

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those powers, which *Harlestonensis* has attempted to sweep away. To overawe speculation in any art, or in any science, is to doom into a state, stationary as to improvement, and in the department of medicine, we can never be competent to appreciate the value of *Digatalis*, or any other agent, till we have patiently tried their effects on the system.

Harlestonensis may have employed, and he may have abandoned the articles which he has mentioned; but we ought to have his practice more in detail; we ought to be informed how long; in what doses; and in what diseases he employed those agents. Till he put us in possession of additional information, we cannot admit of consigning to oblivion, by one "fell swoop," powers so generally and so beneficially employed. The first article of his reprobation is *Digitalis*. What preparations of the plant? in what doses? and in what diseases has he administered it? Will he tell us that his experience has settled his faith; that the *Digitalis* exerts no influence over the action of the heart? Or will he tell us, that an unguarded employment of it has, in his hands, produced effects highly deleterious? A cure of disease may be sometimes gradually effected by the instruments of our art; and their operation may never become an immediate object of the senses. The operation of *Digitalis* is speedily perceptible; in a few hours sometimes, but very certainly in a few days, its effects on arterial action are clearly demonstrated.

Harlestonensis asserts generally, that the *Digitalis* has been tried and abandoned; with the exception of himself, I would ask him, by whom has it been abandoned? Has it fallen into discredit with those men who know in what preparation, in what doses, at what times, and in what diseases, so administer it? The apothecaries of this place, are men nighly respectable; for many years I have witnessed their employment of *Digitalis;* and I have often heard them declare, that were they deprived of its aid, they could not, with satisfaction to themselves, pursue their profession. An ample experience of the power of this plant has made it to them inestimable; and they have long been accustomed to rank it with *opium,* the *bark of Cinchona,* and other important essentials of the *Materia Medica.* The periodical publications too, afford us indisputable evidence of its beneficial employment in every quarter of the British empire, and on the continents of Europe and America. The writers too, who have given it celebrity, are men of the first character. The names of *Withering,*

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Withering, Ferriar, Beddoes, Drake, M'Lean, Thomas, and *Hamilton,* are familiar to every man of medical literature. The late venerable *Heberden,* who took lessons at the bed-side for half a century, speaks of *Digitalis* in language singularly expressive. If this mass of evidence be insufficient to convince Harlestonensis that *Digitalis* continues to be extensively employed, he may have additional testimony, by an application to the venders of the plant. I am not wedded to any opinion; nor am I ambitious to support any particular theory. I profess to have nothing in view but to arrive at a knowledge of the truth; and in obedience to this object, I formerly did, as I do now, volunteer my experience in defence of an ingredient, which I think truly valuable in the science of healing. It is not to be expected that *Digitalis* should operate as an universal panacea; nor have its advocates ever annexed to it the character of infallibility. They have told us, and they have told us truly, that *Digitalis will lessen the action of the heart;* and they have, therefore, very properly recommended it in diseases, in which the action of that organ was inordinately increased; and I am fully persuaded, that no man will ever abandon the use of *Digitalis,* who has given it a judicious and patient trial. I have known it administered *in the dose of one fourth of a grain every six hours, and to a robust man labouring under pulmonary inflammation.* In such contemptible doses it is impossible for it to effect any thing. The practitioner must be disappointed; the plant must lose its credit. But let the *Digitalis* be administered every two or three hours, in the dose of *twenty drops of the saturated tincture,* or in *one grain of the powder properly prepared,* in a short space of time the heart will come under its influence, and the blood will be sent through the lungs with diminished velocity. Again, I have heard of *Digitalis* being exhibited three or four times a day, and in the dose of three or four grains, without any sensible effect: this needs no comment. The plant must have lost its efficient qualities; and it is impossible for any man, to benefit society, or add to the stock of medical literature, who experiments in this slovenly manner.

I do not pretend to measure with exactness the precise quantity of *Digitalis* which may be necessary to influence the heart, and produce its full effect; but I know, that in ninety-nine cases of the hundred, the dose I have mentioned will be sufficient for this purpose. I also know, that when the urgency of the case demands it, I can, in twenty-

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twenty-four hours, exhibit twelve grains of the powder, not only with the most perfect safety, but with the most striking advantage. When it is necessary speedily to change the system with *Digitalis*, and when the quantity above-mentioned is daily to be administered, it must be given in small, and frequently repeated doses. I need not observe, that under those circumstances, frequent visits to the bedside of the patient are indispensible. The proper dose of any medicine is precisely that quantity which will produce the desired effect. We all know that *mercurial unction* will, sooner or later, influence the system; and yet no man can tell the number of drachms or ounces, which may be necessary to effect this change. *Digitalis* has been, and it will, I think, ever continue to be, a fashionable remedy in all the various stages of what is called *hectic fever*; and therefore it will be frequently administered under circumstances of disorganization, when no power could possibly preserve life, but the great Artist who first imparted it. If this paper should ever occupy the attention of *Harletonensis*, let me implore him, for the sake of humanity, to give *Digitalis* in *pleuritis, peripneumonia, phthisis* in its early stages, *mania*, in *general* and *local* dropsies; and, when, with due caution, he has given it a candid and a patient trial, let him tell me if he can abandon its use.

So much on the subject of *Digitalis*. I shall now very briefly notice the other articles which Harlestonensis has dismissed with marks of his disapprobation.

Has he ever employed the *uva ursi* in *diseases of the bladder and urinary passages?* and more especially, has he ever tried it in *gonorrhœa?* Has he ever administered the *lichen islandicus*, as a nutritive mucilage, in cases of *phthisis* combined with *digitalis*, and the well known *myrrh mixture* of the late Dr. *Griffith?* Has he ever consulted Dr. *Marcet's* Report of the *oxyd of bismuth*, in the Memoirs of the London Medical Society? or has he ever perused the pages from the elegant pen of Dr. *Bardsley?* If he has not, I earnestly request that he may; that he may try the *oxyd* of the quality, in the form prescribed, and in the diseases pointed out, by that justly celebrated physician.

Has Harlestonensis ever paid any attention to the very excellent effects of distilled or soft water, in *affections of the stomach, accompanied by indigestion?*

By these queries, I am solicitous to fix Harlestonensis's attention to subjects, which he has not considered at all,

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or very superficially; and before he banishes *mercury* from the class of remedies to be employed in *Typhus*, I would have him consult the writings, and pause upon the experience, of *Rush*, *Hamilton*, and *Jackson*.

I am, &c.

* GEORGE MOSSMAN.

Bradford, Yorkshire, Sept. 12, 1808.

P. S. In your last Number, there are two communications from Harlestonensis. The latter, addressed to "S. Strowger," and couched, as I think, in terms not the most becoming. The stateliness which he has assumed, and his affectation of treating his adversary with contempt, are never creditable qualities in a man of science, and very certainly they never bear with them any sort of conviction. The features of an unforgiving rivalship are too visibly marked in every line; and I really think that Mr. *Taylor* does not compliment either his own comprehension, or that of his Friends, by affecting not to understand the paper of Mr. *Strowger*; nor am I at all disposed to admit of Mr. *Taylor*'s claim of superiority, over his opponent. On the face of Mr. *Strowger's* paper, it is sufficiently plain to a very common understanding, that he means to recommend two fashionable, and, as he thinks, two very valuable articles of the *Materia Medica*. I know nothing of the parties, but I cannot help lamenting that any narrow jealousy should obtrude itself upon discussions so truly interesting.

G. M.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

ON June 28, 1807, I inoculated a child four months old for the cow-pox; the pustule on the arm rose well, and was at the height about the tenth day, but I in general prefer taking matter on the eighth or ninth day, which I did on the latter day in this case. Mrs. E. mother to the child, informed me there was a spot, as she termed it, upon the inside of one thigh, and on examining it I told her I thought it was the cow-pox, but it was about three days later than the inoculated one; I requested she would be

* The Editors are much gratified by Dr. Mossman's resumption of his communications, as they have always been fully sensible of their value.

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be kind enough to take care it was not rubbed off, and I would call again in two or three days, and look at it; when I was agreeably surprised to see the opinion I entertained of it, verified; it was in every respect, a well defined pustule. I inoculated two children with matter taken from it, which had the desired effect on them both; the pustules were at the height on the 9th day, and I continued to inoculate with matter from that source, some time afterwards, without any deviation from the genuine vaccine pock. It is a well known fact, some children are often very uncomfortable for many hours, for want of cloths being more frequently applied; and in consequence of such neglect, their thighs are in such a state of irritation, that they will, if possible, get their hands to the *part* and rub or scratch them, I therefore thought the infection might have been communicated in that way; but Mrs. E. at that time had the whole management of her child, and on particular inquiry, I was informed he never attempted to put his hands either to the arm or thigh, so that the infection could not be communicated by any artificial means, but must have entered the system by the power of absorption. I have read a great deal in the Medical Journal, the Edinburgh Surgical Journal, and other publications, respecting the vaccine disease, but don't recollect a similar instance, related by any of your correspondents; and thinking there was something novel in this case, I have taken the liberty to send you the particulars, which if you think merits your attention, you are requested to publish it in your much esteemed Journal, in such way as you think proper, with my best wishes for whatever promotes the improvement of Medical Science in general, but the cow-pox in particular.

I am, &c.

J. GOODHALL,

Epworth, Sept. 8, 1808.

Striking Instance of the salutary Effects of Vaccination.
Communicated by A. V. H. TELLEGEN, M. D.

ALTHOUGH we have reason to pride ourselves on the success Vaccination has experienced in this country, it nevertheless appears, that now and then some few children fall victims to the natural small-pox; that such unfortunate objects should attract our notice, and induce us to

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shed a tear of pity, is very natural, especially when it is considered that the negligence of their parents was certainly instrumental to their death; but, however deplorable this state of things may be, I can, however, by no means concur in the assertion that this negligence proceeds from a culpable prejudice against vaccination; for my own part, I am rather induced to suppose, that the omitting of vaccine inoculation, is more to be ascribed to a want of conviction, and, consequently, to ignorance, than to mere vulgar prejudice.

As examples are always more persuasive and efficient than arguments or moral strictures, I thought it would not be unserviceable to make the public acquainted with some facts, which, in my course of practice, have come immediately to my own knowledge, whence the public may judge how far vaccination is entitled to general patronage and adoption. After having, in the course of last year, inoculated about twenty-five children at *Elde* and *Paterswalde*, in the department of *Drenthe*, with vaccine matter, the natural small-pox made its appearance last winter at both these places as usual; they soon became extremely virulent, several children suffered severely, three died of the distemper, and one lost its right eye, while the above mentioned twenty-five children who were vaccinated, remained free from all contagion during the whole of the time that this disease raged there with such virulence; this circumstance naturally attracted the notice of the inhabitants; many parents were induced to have recourse to vaccination, and in the course of a fortnight, one hundred and fifty children of different ages were brought to me for that purpose, and the consequence happily was, that the further progress of the natural small-pox, which threatened the most serious and fatal effects, was not only immediately arrested, but even, (if I may be allowed the expression) so completely exterminated, that since that period, not one child has died, or otherwise suffered by this dreadful disorder. In order to shew that I have not overrated its beneficial effects, I here subjoin the following certificate.

I do hereby certify, that the above number of children belonging to the districts of *Elde* and *Paterswalde*, and in which number I may also include one of my own, have been vaccinated by A. V. H. *Tellegen*, M. D. at *Groningen*, with that happy and salutary effect, that they have thereby entirely escaped the contagion of the natural small-pox which

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which raged here with so much violence during the course of last winter.

P. SPECKMAN,

Elde, June 6, 1808. Minister of the Gospel at *Elde.*

" The proofs which this city, (Groningen) affords of the happy effects and power of this inoculation are of no less importance. The number of persons inoculated with vaccine matter may be fairly estimated at about 3,000, many of them were afterwards again inoculated with the small-pox; others have eaten, slept, and have been continually kept with children who actually at the time had the natural small-pox, without any one of them having hitherto caught the infection. Since two years, the natural small-pox does sometimes make its appearance in some parts of this city, but the disorder is wholly confined to such persons as have hitherto not received the benefit of vaccination. As a proof of the truth of this treatment, I shall only mention, that hitherto no person has applied to me for the premium, (ten ducats) which I two years ago offered for every child, who, after having regularly gone thro' the process of vaccination, should afterwards take the natural small-pox, or should have died in consequence of the vaccine inoculation. I take this opportunity to repeat the offer I made at that time, provided sufficient proofs are given that *such child or children were regularly vaccinated in this city by a person well acquainted with the process of vaccination, and that such person does certify that the pustule proceeding therefrom, was in every respect genuine.*

Heaven grant that every true philanthropist, and especially every magistrate, minister, or school-master, as well in town as in country, would use his influence to recommend and give every degree of publicity to this invaluable preventive, revealed as it were by Heaven for the benefit of the human species; how many parents and children would not thereby be preserved to society!

Dutch Royal Courant, July 21, 1808."

To

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Have not been able to conceive the cause or origin of the cellular structure of the Vaccine Pock. Can the application of an active virus excite, or set up, a creative action in the system, so assailed, or attacked? Dr. Jenner says, "Nature appears to have no more difficulty in forming minute glands, among the vascular parts of the body, than she has in forming blood-vessels, and millions of these can be called into existence, when inflammation is excited, in a few hours."

Mr. Dunning says, "If the vaccine vesicle be a congeries of cells insulated with respect to each other, must we not consider this constitution of it as a wise and beautiful œconomy of Nature for preserving its precious contents from casualty and exposure." He says, moreover, "This undoubtedly is the inference which Dr. Jenner draws, and wishes should be drawn from it."

O Doctor! Doctor! Mortalium felicissime! non solum beneficia certa naturæ hominibus libenter dedisti; sed etiam consilia ejus, satis inexplicabilia, demonstras, et (bone sacerdos!) fidem exigis: et nonnullos habes fidelissimos.

From neither of these statements, romantic or religious, have I been able to form any conception of the cause or origin of the organized structure. Dr. Willan says, "the vesicle consists internally of numerous little cells filled with clear lymph, and communicating with each other. These are, perhaps, only a portion of the cellular membrane, *(tissu-cellulaire)* distended by the effusion of lymph. Most other vesicular eruptions consist of simple vesicles." On casting my eye on this explanation, I was immediately struck with the recollection of the bewildered maid in the mask of Comus. 'It was a sable cloud turned out its silvery lining on the night.' It is cellular membrane, the *rete mucosum*, which unfolds itself, and receives the vaccine ichor as produced in the chemico-animal process, set up, under the cuticle, and which burgeons outward, and presses inward, as the pock advances to its full dimensions.

When it has acquired these, does it act as an extraneous body irritating and inflaming the surrounding muscle? does absorption then take place in part from such excitement; and is the whole system threatened to be overwhelmed with the ingress of a deleterious virus? Does the injury threatened, the violence done, by the immediate absorption

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absorption of virus, all round the pock, cause the evident, the palpable, the local, morbid, affection, the distinct areola, the erythematous induration, to take place, and thus to form a sort of barrier against the full ingress of a deadly poison? If a hurtful and dangerous ingress be thus prevented, there is, notwithstanding, a general effect produced on the skin, as is evident from the circumstance of its being *now* most rapidly affected by the insertion of vaccine virus into any part of it, as well as from the *hereafter insusceptibility* both of the vaccine and variolous infection. It is remarkable, that in some of those subjects who have already had the small-pox, and in whom there seems to be an insusceptibility of this very great and local effect, this perfectly characteristic erythematous induration, or distinct areola, at the place of insition, there is an evident early susceptibility of a very general effect in the system. Of this I felt very sensible in my own person in less than a week after inoculating myself on the Atlantic, in 1800; so much so, that I should have had the weakness to have been under considerable alarm, as I had not yet met with a similar case; but, just at that time, we fell in with the gun-boats of Algesiras, in our approach to Gibraltar, and received such salutes, (projections of shot and shells, which passed over us or fell short) both from them and the Spanish forts ashore, as caused the apprehension, of a danger that was only imaginary, to give place to that of one which seemed seriously real. I have known several to be considerably affected by such experiments, and by accidental inoculations of the cow-pock, remarking, at the time, that if the variolous inoculation had been found to produce so great an effect, after vaccination, this would never have been adopted. In such subjects, I have frequently, distinctly, noticed the course of the absorbents, along a whole limb, by the inflammation, a thing unusual in perfect vaccination. Such appearance, perhaps, renders the notion, however fanciful, at least plausible; that the erythematous induration, at the pock, may prevent a hurtful, uninterrupted, ingress of a deleterious virus into the system, which has not yet lost its original susceptibility; while that skin, which has been already guarded, by the small-pox, or a previous inoculation, is not now sufficiently irritable, or excitable, in any part of it, to have such distinct and circumscribing induration produced, by the application of the virus, however active.

Respectfully,

JOHN WALKER.

Salisbury Court, 18, in, 1808.

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Observations *on the* Functions *of the* Liver, *and on the* Importance *of that* Organ *as possessing great* Associate Influence, *and as a frequent* Seat *of* Morbid Affections; *being an Abstract of a Paper read before the Physical Society of New York, October* 7, 1802. *By Dr.* Malachi Foot.

A CONSIDERATION of the *associate* diseases of the liver would be naturally preceded by that of the *primary* diseases of that organ, and also a description of those morbid conditions of the alimentary canal, arising from the varying states of the bilious secretion; but a detail so lengthy as would be necessary fully to accomplish this, is, with propriety, here limited to a few observations.

The liver, whether we form our estimate from its functions in health, or the evil consequences of its diseased state, is one of the most important organs of the human body. Its office, together with those of the *gall-bladder* and *ductus communis choledochus*, is to supply the intestines with bile for the purposes of digestion, and preventing the inconveniencies resulting from the natural decomposition of food within the alimentary canal.

Digestion has, till lately, been considered as one of the most mysterious functions of the animal body. It is the great leading process of that assimilation which converts dead animal and vegetable matter into nutriment and organized life.

Digestion differs so materially from that natural decomposition of bodies, during the process of fermentation, that the slightest degree of the latter, within the alimentary canal, is productive of inconvenience. The disengagement of noxious gases, and especially of that mephitic poison, a product of the putrefactive process, abounding particularly in the lean of animal meats, is among the evils of imperfect assimilation.

The great efficacy which the bile exerts in preventing these evils is not always justly appreciated. The properties of pure bile are saponaceous, alkaline, and oleaginous; whence the liver has lately, with much propriety, been termed "the great manufactory of soda for the purposes of the system."

Whether *dyspepsia* is ever idiopathic, simply as respects the stomach, is very problematical. The old opinion, that trituration constitutes a very considerable part of the business of digestion, has become more inadmissible since

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the explosion of mechanical doctrines as explanatory of living action.* The gastric juice being a secreted fluid, like all other secretions, varies with the state of its secretory organ; yet the marks of diversity, as to its quantity or morbid qualities, are by no means so conspicuous and distinct as those of the *bilious* secretion.†

There exists between the stomach and liver a most intimate and important association. The latter, in its healthy state, is ever ready to perform its offices at the instance of the former. In ordinary states of the digestive function, when the articles taken in are of a proper nature, and in due quantity, the presence of a very large store of bile is not necessary; but such is its importance, that an absence of this friendly fluid, even for a short time, merely as respects the stomach, is attended with the greatest inconveniences. Its primary and ordinary office is to meet the aliment in its passage from the pylorus through the duodenum, and at that instant when it might otherwise assume the most noxious form, intimately to combine with it, disarm it of its deadly weapons, and render it a peaceable passenger in its mazy course. The quantity of bile excreted into the duodenum, within certain bounds, is proportionate to its need. Such is the animal economy, that those qualities which require an extraordinary quantity, provoke an unusual secretion. This is particularly exemplified by the presence in the stomach of a strong acid, and especially that noxious form of it resulting from the natural decomposition of aliment. When united to an acid, bile is changed to a greenish colour, termed "porraceous," and, in this vitiated and remarkable form, is exposed to our view. Such are the healthful qualities of this fluid, in its pure state, that the term "redundancy of bile," in Physic, is as improper as that of "excessive virtue," in Ethics.

Do the several modifications of diseases of the alimentary canal arise from diversity of temperaments (as they are described by Dr. Darwin) and the influence of epidemic causes? May not the liver often be said to be the primary seat

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* See the Experiments of Spallanzani on this subject.

† Dispensing with the consideration of the theory of digestion, every physician must have noticed, that the most prominent symptoms attending the dyspeptic may be resolved into the effects which naturally result from a deficiency in the bilious secretion. Does habitual dyspepsia seldom occur without evident marks of a *torpid liver*?

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seat of these diseases, or the medium through which epidemic causes operate? And will not a balance between the noxious agents and the antiseptic virtues of pure bile ever insure health? Inferences, drawn from some modern principles, promise much towards a solution of these inquiries.

Sympathy may be defined to be that synchronous or successive condition of two or more parts of living bodies, arising from the operation of a local cause. Mechanic reasoning can with no propriety be applied to the explanation of the important doctrines of association. It is not satisfactorily explained by the trite notions of vascular or nervous anastomoses; nor is it to be assigned, *en masse*, to contiguity of origin in the sensorium commune. To become an adept in this science, requires a more complete acquaintance with that principle which constitutes the difference between living and dead matter, the origin of our early motions, and the manner and extent of the operation of external agents. Though I cannot second the declaration of the great author of the Brunonian system in execrating physiology, yet I possess a strong impression that the study of it contributes but partially to an acquaintance with the interesting doctrines of morbid association. As a specimen of its inadequacy, I might challenge the ingenuity of the best informed physioligist, even with the aid of a most lively fancy, to explain satisfactorily the phenomenon of *singultus nephriticus* (hiccup from calculus in the kidney), or the cause of *tensio penis* in *hydrophobia*.

The important office of the liver, in furnishing the bile, is only equalled by its possessing over the system a strong and most extensive associate influence. This organ obviously derives its extensively controuling powers through the medium of the stomach, which having commenced its functions in our earliest embryo-state, and being the great seat of our pleasurable sensations, may almost be termed the seat of life.

It is a happy provision in the animal economy, that these organs, exposed, as they are, from the nature of their offices, to the exciting causes of disease, while they possess a high degree of *irritability*, are almost destitute of *sensibility*. The liver, as a second link of a train of associations, and possessing rather more sensibility than its principal (the stomach), assumes her morbid states, and transfers them to a third part, possessed of still more than herself: thus gastritis is a disease of less frequent occurrence than hepatitis, and a phlegmon of an inferior ex-

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tremity, or an affection of the parts about the right shoulder, is of more frequent occurrence than either.

Among the associate diseases of the liver we may class some of the following.

1. *Erysipelas.* This is a sensitive affection of the external surface, frequently sympathetic of a morbid irritation of the membranes about the liver, and belongs to Dr. Darwin's class of associate diseases. As there is an intimate consent between the internal viscera and external surface generally, this disease may arise from an affection of some other viscus. It is commonly preceded by a fever of two or three days continuance, terminating in this metastasis (of action, not of fluid) to the surface. As the cause does not reside in the place of its appearance, it is liable to recede on exposing the part to cold. Of the same origin is the pimpled face of females of habits of great associability, and the *gutta rosea* of intemperate persons.

2. *Gout* and *Rheumatism.* Are not these diseases often of hepatic origin.

3. *Colica Saturnina.* The *modus operandi* by which *lead* produces its deleterious effects is not well understood. Its most obvious property is that of a great stimulus to the absorbent system. In the cases in which it proves injurious, marks of a torpid liver are conspicuous. The general symptoms are, dyspepsia, flatulence, costiveness, colic pain, pallid complexion, low spirits, a partial paralysis, more especially of the right arm and shoulder, sometimes attended with a severe pain—hepatic cough, and general debility. A removal of the usual symptoms, in a case of this kind, by mercury, was succeeded by a permanent *gutta rosea* of the face.

4. *Asthma.* Of the two species of this disease, the humid is often a sympathetic affection. The lungs and liver, separated only by the diaphragm, are intimately associated. The exciting cause of humid asthma is the irritation of a saline mucus lodged in the air cells from deficient absorption. In the case of *torpor hepaticus* it may arise from *direct* sympathy; in *chronic hepatitis* from *reverse.* The laborious respiration and cough are a combination of voluntary and sensitive motion, for the purpose of relieving pain and removing the offending cause. For the sake of illustration, I trust I shall be excused in relating briefly the history of a case most obviously apposite.

Among other marks of an occasional occurrence of chronic hepatitis, or a morbid degree of irritation of the membranes about the liver, the most troublesome was an obtuse

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obtuse pain in the right hypochondre, attended with much anxiety. This succeeded an attack of intermittent fever, during a short residence in a marshy country. The first and most conspicuous associate symptom was a periodical head-ach, generally in the form of hemicrania; commencing with cold chills, and, for the most part, terminating in anorexia and vomiting. This translation of pain was attended with a removal of all sensitive affection from the primary part, and was obviously owing to an increased sensibility and mobility of the membranes about the head, produced by a change of employment from an easy and sedentary life, to the situation of a person constantly exposed to all the vicissitudes of temperature between the extremes of heat and cold. A removal of these causes, by a change of residence, and the inexposure and ease of a city life, with the inconvenience of a frequent inhalation of deleterious gases, has converted this form of disease to a most troublesome *asthma*. That this form of affection results from the original cause (morbid irritation of the hepatic membranes), is rendered probable both by the circumstances attending the occurrence of the paroxysms, and the operation of remedies. That, in this instance, a reverse sympathy obtains between the liver and lungs, is rendered conclusive by the two-fold consideration, that both those causes which produced a direct influence on the former, through the medium of the stomach—as the stimulus of a full meal, acids, aromatics, or wine—as readily and invariably produce its paroxysms as the direct operation of noxious gases on the *lungs*, or the sudden exposure of that organ, and also the surface, to a cold and moist atmosphere. Correspondent to the operation of the exciting causes is also the operation of remedies. A diminished excitement of the stomach and liver, by the action of digitalis— a nauseating portion of ipecacuanha—or fifteen hours abstinence—are not less certain in procuring relief than the inhalation of the fumes of tobacco— breathing the warm and dry air of a tight room—or the stimulus of additional flannel to the surface. The most complete relief from this very uncomfortable disease has, of late, been obtained, by taking three grains of *mild muriate of quicksilver* for eight successive days. Does the certain temporary relief derived from the high diffusible stimuli, as opium and camphor, arise from the universality of their operation in dissevering morbid associations, and exciting increased action throughout the system?

5. *Phlegmon of the extremities*, without evident local

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cause—that species of affection termed *fever-sore—paronychia* and *boils.* Are these frequently substitutes for acute inflammation of the liver, or sympathetic of a chronic disease of that viscus?

6. *Sphacelation of the fleshy parts,* with a caries of the bones of the toes. This curious species of affection, though not of frequent occurrence, is, however, under the usual mode of treatment, as a local disease only, often very troublesome, extending to the metatarsal bones, and gradually wasting the whole foot. Permit me to state, that two cases of this kind, which have come under my inspection, have afforded ample proofs of their hepatic origin. Does the known sympathy between the liver and feet place this affection, as to origin, on the same ground of probability with *gout?* and does the benefit arising from a liberal use of opium in these cases, as recommended by Mr. Pott, result from its high stimulant powers in exciting the healthy actions of a torpid liver?

Among errors in nosology, probably there are none more universal than the opinion that certain symptoms, expressive of hepatic disease in children, denote the existence of worms in the alimentary canal. That those symptoms frequently indicate their existence is well ascertained; but in a majority of cases, they unequivocally arise from a want of the healthy actions of the liver, of which the existence of worms is only a symptom.

I shall conclude this part of my subject by stating the intimate connection between our mental faculties and enjoyments, and a healthy state of this organ.

The two great sources of our happiness are the exercise of our intellects, and those healthy operations of our bodies of which we are unconscious, and which, unlike the former, commence with our existence. Reasoning *a posteriori,* we may safely conclude that a very considerable number of the cases of *tædium vitæ* arise from a disordered state of this organ. Our pleasurable and painful sensations so uniformly correspond with the healthy and morbid states of the liver, that they reciprocally excite each other. So sensible of this connection were the ancient writers on medicine, that, by the use of a simple term to express either, they conveyed the complex idea of both: hence the word *melancholia,* from the Greek μέλας, *black,* and χολη, *bile*; hence also the term *hypochondriasis,* referring to that region of the abdomen which is the seat of the disease: and when they described a person of an irritable and

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and peevish disposition, they termed him *choleric*, from χολη, a diseased state of the bile.

Among the causes of hepatic diseases we may count some of the following.

1. Intemperance in the use of spirituous liquors, and other high diffusible stimuli.

2. Intense and constant grief; and a sedentary life, with close study on subjects destitute of amusement.

3. The constant practice of equitation in rough countries; and the swallowing large quantities of cold liquids, with the body previously heated.

4. The practice of too frequent taking of food between the regular periods of meals, and an inordinate use of saccharine and oily food. Does the latter article produce a torpid liver, by destroying the stimulant properties of the gastric juice, from chemical operation? We are told, by the satirical Horace, in describing the capons of that day, that the Romans possessed the art of enlarging the livers of their fowls to the size of the whole body. This art is practised by the Sicilians of the present day; and it is said to be effected by feeding them liberally with food impregnated with oil.* Common practice prohibits the use of oily food in all cases of troublesome herpetic eruption, of which a great proportion are sympathetic of hepatic affections.

5. Imprudent removal of flannel dress; cold and damp lodgings; and an improper use of the cold bath.

6. Vicissitudes of weather, and change of climate. Amongst European emigrants, no people appear to experience the inconvenience of our climate more sensibly than the Welsh. What should constitute so wide a difference between that people and the Irish, I am not able satisfactorily to explain. The climate of *Wales* is not more temperate, nor the weather less variable, than in *Ireland*. Is this difference to be imputed to diversity in the modes of life, and peculiar national temperaments?

7. The operation of certain *deleterious gases*. Like the case of the clown and violin, an illustration well introduced, on another occasion, by the ingenious Dr. Rush; whenever I view this subject I am obliged to relinquish it, with the poor consolation of having only discovered the way leading to hidden treasure. Much light is thrown on it

* Vide Zoonomia, vol. i. p. 258.

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it in a *Dissertation on the sympathy of the stomach.** In all cases of *fever*, whether intermittent, remittent, continued, malignant, or yellow fever, and the concomitant diseases of that situation and season most favourable to their production, there are almost invariable marks of an affection of the liver.

Those symptoms usually and improperly denominated *bilious*, and attendant on these fevers, are familiarly spoken of by physicians, without ever attempting their explanation, whether they are to be viewed in the light of cause, effect, or symptom.

As the length of this paper excludes a particular examination of remedies, permit me to notice only two of those articles which admit of more general application, viz. *mercury* and *alkalies*.

If we may be allowed to compare the effects of mercury with that inert practice which accomplishes *nothing*; if an estimation of the effective powers of an article may be drawn from its ability in arresting the shafts of death, whether he approaches with gradual, but certain aim; or, rushing on with gigantic strides, boldly and suddenly stares the unhappy victim in the face—may we not, with some degree of propriety, balance this article with almost the whole of the materia medica in common use? It has, of late, (and without an hyperbole) received the appellation of the *Sampson* among remedies.

The explanation of the *modus operandi* of alkalies, and their more general introduction into practice, especially in fevers, has presented us with a new æra in medicine.

That a doctrine so discordant with those taught by most medical writers, and differing so entirely from the habits of thinking and practice of physicians, and which, from its extensive application, must effect so important a revolution in prescription, should meet with opposition, even from men of talents, is so far from militating against its worth, that a contrary reception would excite suspicion of its futility. An attempt to vindicate this doctrine, *a priori*, would be impeaching the well-known talents of its author: nor need I here assert that it is bottomed on the interesting discovery, that a gaseous poison—an oxyd—probably the compound of *septon* and *oxygen*—is a principal agent in the production of pestilence and its kindred diseases

* Vide Medical Repository, vol. v. p. 300.

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diseases. The uniform nature of all the phenomena which constantly meet the eye, and are strikingly exhibited to the notice of every discerning mind, especially in epidemic seasons, conjoined to the practical testimony of a very respectable number of physicians within this city and country, of the great value of alkalies in fever and otherwise, are sufficient to establish it against the cabals of a *host* of European opponents. Consenting even to put in competition with the uniform and striking phenomena of nature, and the most unequivocal facts, the result of chemical analysis, as exhibited by artificial management, what is the conclusion? The experiments of Davy, Fourcroy, and others (even giving full credit to their testimony), amount simply to this: that *nitrous oxyd*, a principle differing materially from the *septic poison* of Dr. Mitchill, when inhaled into the lungs from a pneumatic apparatus, possesses high, and even morbid stimulant properties; and when applied to dead animal substances, retards putrefaction. To the first of these positions, even granting the identity of the agents, I shall only state, that the symptoms too of yellow fever uniformly evince that the morbid cause is a substance of high stimulant properties, and that the rapid tendency to disorganization is the result of a sudden exhaustion of the powers of life, constituting the indirect debility of Dr. Brown. Were it not too great a digression from this subject, I might trace the analogy between pestilence and the cases of poisoning by *arsenic*, the bites of rabid animals and venomous reptiles, where the morbid cause is known to be a stimulant of the highest grade. As to the objection arising from the antiseptic powers of nitrous acid, at this period of medical improvement, when the two sets of laws which regulate living and dead matter are no longer confounded, it merits not a serious consideration.

Observations *on the* Conversion *of* Iron *into* Steel.

By the Rev. Joseph Priestley, *LL. D.*

According to the antiphlogistic theory, iron becomes steel by imbibing *carbone*. To this is said to be owing the addition to its *weight* in the process of cementation; and the black flakes which remain undissolved after the solution

tion of steel in diluted vitrolic acid, is said to be *plumbago*, or carbone united to iron.

I cannot, however, help concluding, from some late experiments, that iron is converted into steel by imbibing only phlogiston from the charcoal with which it is cemented, and that the addition to its weight is not from *carbone*, but from *finery cinder*.

Having made a quantity of iron filings perfectly pure, by first expelling from them all the air that they would yield by heat, then washing out any carbonaceous matter that might be contained in them, and again exposing them to heat, I took 120 grains of them, and, heating them with a burning lens in inflammable air, they imbibed eighteen ounce-measures of it.

In consequence of this, from being of a dark colour, they became exceedingly bright, and I concluded that they had now become steel, though I could not prove it by any decisive experiment. But, after dissolving them in diluted vitriolic acid, a quantity of black matter, as from the solution of steel, remained unaffected by it. This being heated in inflammable air, imbibed a considerable quantity of it; and then, by means of diluted vitriolic acid, it gave inflammable air very copiously. This black matter, therefore, had evidently the properties of finery cinder.

I then dissolved 200 grains of broken *watch-springs*, which are undoubtedly pure steel, and collected from the solution three grains of black matter. Heating this inflammable air, it imbibed a great proportion of it, and then by means of the diluted acid, it gave inflammable air as copiously as iron or steel filings would have done. This black matter, therefore, was finery cinder, and not carbone or plumbago; and, as iron acquires weight by becoming finery cinder, and this weight I think I have proved to come from its absorption of *water*, it can hardly be doubted but that this addition of weight to iron, in becoming steel, is from the same cause. Indeed, I believe it to be impossible to expose iron to a red heat in circumstances in which there is any possible access of water, or of air which always contains water, without a partial calcination of it, that is, its becoming, superficially at least, finery cinder.

This was evidently the difference between the solution of the watch-springs, and that of an equal weight, viz. 200 grains) of broken *polished needles*, which had not undergone any calcination: for the black matter that remained

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mainded from the solution of them would not have weighed a quarter of a grain. Giving colour to steel (which is done to the watch-springs) is always a partial calcination of it, and this appears, from the preceding experiments, to be a conversion of part of the metal into finery cinder, which is the reverse of plumbago, being, according to the new theory, an *oxyd* in the highest possible degree; whereas, if plumbago contain any oxygen, it is in the lowest degree.

Botanical Description of British Plants.

[Continued from our last, pp. 267—272.]

34. Fucus.

Gen. Desc. Fructification consists of capsule-like globules, or of granulations within the substance of the plant, with a perforation above them.

Use. There can be little doubt of the Fuci being the food of various kinds of fish. They are indiscriminately used as manure by the farmers on the sea-coast.—The stalk of the F. esculentus may be eaten, as may also that of the F. saccharinus when boiled; but the more crisp and tender leaves of the F. lanceolatus, holosetaceus, and pinnatifidus are used as sallad. The F. vesiculosus is collected on the Northern shores, and burnt to make kelp.—*Withering.*

35. *F. vesiculosus.*

Ang. Bladder fucus. Common sea wrack.

Spec. Desc. Plant flat, forked, mid-ribbed, entire at the edges: *bladders* axillary, or at the sides of the mid rib, eliptical: *tubercles* in the ends of the leaves. The bladders at the divisions of the leaf, in pairs; the others solitary: those in the substance of the leaf, contain the fructifications. *Plant* about one foot high, thick, leathery. Turns red in decay. *Leaves* one half to one inch in breadth.—*Rocks and stones in the sea, common.* Bl. Jan. Dec.

Note. This species is subject to considerable varieties, for which, see the Botanical arrangements.

Use. The mucus in the vesicles of this plant was found, by Dr. Russel, to be a good resolvent, and useful in dispersing all scorbutic and scrophulous swellings of the glands. The patient is to rub the tumour with these vesi-

cles

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cles bruised in his hand, till the mucus has thoroughly penetrated the part, and afterwards to wash with sea water. Or else, let him gather two pounds of the vesicles in July, when they are full of mucus, and infuse them in a quart of sea-water, in a glass vessel, for 15 days; by that time the liquor will have acquired the consistence of honey: let it then be strained through a linen cloth, and, with the hand as before, rubbed three or four times a day upon hard or scrophulous swellings; the part being afterwards washed with sea-water: nothing can be more efficacious in dispersing them. Even schirrosities in the breasts of women are said by him to have been dispelled by this treatment.—By calcining this plant in the open air, the same author made from it a very black salt powder, which he called vegetable æthiops, a medicine much in use as a resolvent and deobstruent; and recommended also as an excellent dentifrice to correct the scorbutic laxity of the gums, and remove the foulness of the teeth.—This plant boiled and mixed with coarse meal, affords excellent food for hogs. It is also used sometimes as fuel: and it abounds so much with salt, as to preserve cheeses. It is very good manure for land: and when burnt, it makes kelp.—*Lightfoot.*

36. Fucus. *F. palmatus.—Ulva palmata.*

Ang. Palmated, or Sweet Fucus. Dullesk, Ireland. Dills, Scotland. Dulls, or Dulse, in Northumberland.

Gen. Desc. *As above.*

Spec. Desc. Stemless, hand-shaped, flat; without a mid rib. *Leaf* v. smooth, waved at the edge, often proliferous; membranaceous, thin, pellucid, green or reddish, near a foot broad.—*Rocks in the sea.* Bl. Jan. Dec.

Use. In the Isle of Skye it is sometimes used in fevers, to promote sweat, being boiled in water, with the addition of a little butter: in this manner it also frequently purges. The Scotch and Irish take pleasure in eating it.—*Lightf.* After being soaked in fresh water, it is eaten either boiled or dried; and in the latter state has something of a violet flavour. In this dried state it is commonly sold in the streets of Dublin, Cork, and other maritime towns in Ireland; and is said to sweeten the breath and kill worms. The poor in the North of Ireland eat it boiled.—*Rutty.*

37. Fucus. *F. esculentus.*

Ang. Eatable fucus.

Gen. Desc. *As above.*

Spec. Desc. Flat, mid-ribbed, pellucid; simple, undivided.

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vided, sword-shaped: *stem* four-cornered, running through the whole length of the leaf; winged at the base with flat sword-shaped leafits; thick, broad, solid, upright. *Leaf* v. large, rounded at the base, narrower towards the end, diaphanous, wonderfully plaited and curled. From 5 to 10 yards long, or more, olive colour. *Sea rocks.* Bl. Jan. Dec.

Use. It is recommended in the disorder called the Pica, to strengthen the stomach, and restore the appetite.—In the North it is eaten both by men and cattle: its season is September: the membranous part is rejected and the stalk only is eaten.—*Lightfoot.*

38. Ulva. *U. umbilicalis.*

Gen. Desc. Fructifications small globules dispersed through a pellucid membranaceous substance.

Spec. Desc. Flat, circular, sitting, target-shaped, leather-like; somewhat hollow. Border indented; fixed only by a point in the middle to the substance on which it grows: dark sooty colour, shining, 4 to 12 inches broad. Uniform, membranaceous, pellucid, v. tender, often gelatinous. *Leaf* flat, varying in breadth. Often torn or perforated by the agitation of the sea. Changes to purple when dry.—*On low sea beaches; rocks and stones at low water.* Bl. Jan. Dec.

Use. This plant is eatable, but it requires baking for some hours to make it sufficiently tender.—*Withering.*

39. Ulva. *U. lactuca.*

Ang. Oyster-green. Green Sloke. Lettuce Laver.

Gen. Desc. As above.

Spec. Desc. Hand-shaped, proliferous, membranaceous; *segments* narrower towards the base, waved, inversely egg-shaped, blunt, transparent. *Leaves* incorporated, pale, hand-shaped, each segment growing out again into hand-shaped leaves; 1 foot high or more, thin, pellucid, bright green.—*Rocks, stones, shells in the sea, and salt water ditches.*

Var. *Tender, slippery, Ang.* Fresh water laver, *grows in ditches and pools.*

Use. An anodyne virtue is ascribed to this plant; and the leaves are sometimes bound about the forehead and temples to assuage the head-ache in fevers, and to procure sleep. The use of it, however, is not supported by any good authority.—*Lightfoot.*

40. Byssus. *B. candida.*

Ang. White cobweb Byssus.

Gen.

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Gen. Desc. Substance like fine down on velvet; simple or feathered.

Spec. Desc. Thread like; threads v. much branched: little branches bundled, whitish. *Substance* tender, woolly, closely pressed to the surface on which it grows; white, or livid, or yellowish. From a broadish, woolly, mucilaginous base arise many slender branches, spreading more in width than in height: elegantly divided and subdivided, the extremities ending in capillary fibres, or an expanded surface.—*Rotten leaves, rotten wood, half rotten leather.* Bl Sept. April.

Use. This is said by Mr. Ray to be made use of as a vulnerary by the common people in Ireland and elsewhere, for the cure of wounds and ulcers: they either first spread salve upon it, or else simply lay it on the part affected.—*Lightfoot.*

Cryptogamia. Fungi.

41. Agaricus. *A. xerampelinus.—A. cæsareus.*

Gen. Desc. Pileus with gills underneath. Gills differing in substance from the rest of the plant: composed of two lamina. Seeds in the gills.

Spec. Desc. Solid and fixed; gills golden yellow, 4 in a set, fixed, just under the edge of the Pileus, nearly orange; none of them branched; fleshy, brittle, serrated at the edge with a pale cottony matter. *Pileus* fine lake red, changing to rich orange buff, and every intermediate shade of these colours which renders it strikingly beautiful; convex, centre bossed, edge turned down, 3 to 4 inches diam. clothy to the touch: flesh pale buff. *Stem* solid, nearly cylind. tapering upwards, rich buff shade with rose red, 3 to 5 inches high, half an inch diam. flesh, pale, buffy, spongy, elastic.—*Fir plantations, decayed fir stumps. There are several varieties, for which, see Bot. Arr.*

Obs. This is the most splendid of all the Agarics. It is common in Italy, and is brought to the markets for sale. The ancient Romans esteemed it one of the greatest luxuries of the table: having been made the vehicle of poison to Claudius Cæsar by his wife Agrippina, it has been celebrated by the satiric pen of Juvenal, and the epigrammatic muse of Martial. *See Shæffer, p.* 65, chiefly taken from *Clus. Hist.* 273, where many other curious circumstances respecting it may be found. Dr. W. however, thinks that the species has been mistaken by these authors, and that the above accounts ought to be transferred to *A. deliciosus,*

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deliciosus, which is still as highly esteemed at the tables of the modern Italians, as it was in ancient Rome. The A. Xerampelinus is eatable, but it has a strong, heavy, earthy taste, and is not at all agreeable.—*Withering.*

42. AGARICUS. *A. muscarius.—A. stipitatus.*

Ang. Bug Agaric.

Gen. Desc. As above.

Spec. Desc. Solid and fixed. Gills white, yellowish with age, numerous, mostly uniform; shorter ones sometimes intervening, solitary without, others smaller on each side, blunt, varying in length, rarely less than one-third of the length of the long ones. *Pileus* varying in colour, brownish or reddish, fleshy, convex flattish, 2 to 7 inches over, turning with age, sprinkled with downy angular warts: flesh white, reddish in decay: warts either raised, compact and angular, or thin, flat, and ragged. *Stem* central, solid, with age hollow, scaly, bulbous at the base, 3 to 5 inches high. *Ring* broad, permanent, turned down upon the stem.

For Vars. with pileus red, white, pink, olive, &c. See Bot. Arr.

Use. This is possessed of an acrid and deleterious quality: but as far as the amount of four, it may be eaten without danger, though ten will occasion delirium.—*Lightfoot.* When mixed with, or infused in milk, flies are said to be killed, or at least stupified by it: and bugs are expelled by the expressed juice rubbed on walls, bedsteads, &c.—*Linnæus.*

43. BOLETUS. *B. igniarius.—Agaricus chirurgorum. Polyporus sessilis.*

Ang. Touchwood Boletus, or Agaric.

Gen. Desc. Pileus with united tubes underneath. Seeds in the tubes.

Spec. Desc. Stemless. Tubes green, or greyish red brown, of different lengths, very slender, equal, in old plants stratified, a fresh layer being added every year: *pores* yellowish, changing to red brown, very fine. *Pileus* convex, shaped like a horse's hoof, smooth, red brown to blackish, tiled, centre depressed, very hard, rubbing to a polish, marked with concentric bands or ridges; a broad ridge marking the year's growth and 3 or 4 smaller, that of the different seasons of the year: varying much in colour. Flesh fibrous. From 2 to 8 inches over.—*Trunks of trees.*

Use. This Agaric has been much used by surgeons as an external styptic, for which purpose that produced on the oak

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oak has been generally preferred. Its use was borrowed from the French; and it was successively recommended by several of their most eminent practitioners, who employed it not only to restrain the bleedings in wounds, but to prevent hæmorrhages after amputations, which it is reported to have done as effectually as the ligature. Cases, in which it has been used with success, have also been published by several English surgeons. Several others, however, soon after the introduction of its use into this country, declared it to be an ineffectual application, and at this day, though it may be useful in certain cases, yet in hæmorrhages from the larger arteries, the ligature is the only remedy depended on both in England and France. To prepare it for surgical purposes, the hard outer part is cut off, and the soft inner substance is divided in pieces and beaten with a hammer to render it still softer. *(See Phil. Transac. v.* 48, *p.* 588.*)* Thus fungus has been named Igniarius from its being used in some places as tinder: for this purpose, the Germans boil it in strong lye, dry it, and boil it again in a solution of salt petre. It is said by Gleditch, that in Franconia, the inner substance of it, beaten so as to resemble soft leather, is made use of, the pieces being sowed together, to form garments.—*Woodville.* Touchwood is made of it, either by paring off the upper rind, boiling the remainder in lye, and then drying it and pounding it with a hammer, or else pounding and boiling it up with salt petre.—*Lightfoot.* As a styptic, it is best when gathered in August or September.—The Laplanders burn it about their habitations in order to keep off a species of the gadfly, which is fatal to the young rein-deer. *Withering.*

44. CLAVARIA. *C. coralloides.*

Gen. Desc. Uniform, upright, club-shaped. Seeds emitted from every part of the surface.

Spec. Desc. Stem branched. *Branches* crowded, much divided and subdivided, unequal: several varieties 1, yellow, *heaths, groves, pastures.* 2. Whitish, or white, solid: *on the ground.* 3. Purple, root, v. large, solid: branches numerous: tops forked, tinged with purple. *Amongst leaves under trees.* 4. Reddish. 5. Pale olive brown: growing in large tufts; general appearance like a cauliflower: substance tender: stems and branches solid, half an inch or more high: roots closely compacted together, forming a more resisting substance than the stems. 6. Grey.—This species varies almost without end, but may be distinguished

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distinguished from the pistillaries, by growing from one base, and being extremely branched.

Obs. All the above plants are very brittle and tender, and it is said may be admitted to our tables: the white and the grey, Dr. Withering says, he knows may be eaten with safety.—*Withering.*

45. TUBER. *T. cibarium.*

Ang. Truffles. Trubs.

Gen. Desc. Stemless. Fleshy, solid, not becoming powdery, not opening at the top.

Spec. Desc. Globular, of the size of a large plumb, solid, warty, whitish, rough with elevated dots, in the centre containing a brown powder, opening with a rent. It is found under the surface of the earth, at the depth of 4 or 5 inches, without any proper root. Its colour dark, approaching to blackness: white within when young; when old, black with whitish veins.—*Under ground, in high woods and pastures.* BL. Sept. May.

Use. This is one of the esculent funguses, and one of the best of them. Dogs are taught to hunt it; and when they scent it, they bark a little, and begin to scratch up the earth. In Italy pigs likewise root it up, and then an attendant takes it from them.—*Withering.*

46. LYCOPERDON. *L. proteus.*—*L. bovista.*

Ang. Bunt. Frogcheese. Puckefist.

Gen. Desc. Roundish, fleshy, firm: becoming powdery and opening at the top: seeds fixed to filaments connected with the inner coat of the plant.

Spec. Desc. Nearly stemless, large: sometimes 12 to 15 inches diam.: roundish, turban-shaped, or thinner downwards: flesh white: seeds dark coloured: skin thin, flaccid. Grows on the ground, sitting: when young white, or pinky grey; when full grown, tawny grey; when old, brown. Surrounded with 3 coats; the *outer* tender, easily abraded; *middle*, tough, leathery, smooth; *inner*, connected with the substance.—*Pastures, road sides, among grass.* BL. August.

Use. The fumes of this when burnt, have a narcotic quality; and it is, on this account, made use of sometimes to take a hive without destroying the bees. This too, as well as the L. aurantiacum is used as a styptic.—It is employed also to carry fuel in from a distance.—*Withering.*

47. MUCOR. *M. chrysospermus.*

Gen. Desc. Seeds naked; or in transparent capsules at the end of the stem.

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Spec. Desc. Extremely fine, yellow; consisting of stems supporting yellow seeds, singly, or in clusters. It is parasitical, and covers the whole surface of the plants on which it grows, and stains the fingers yellow.—*On the Boleti, in shady places; generally on the B. pellucidus.* BL. August, September.

Obs. It has the same property of repelling wet, that has been observed in the seeds of the Lycopodium. A specimen, says Dr. Withering, now before me, is not wetted, though it has been immersed in the fluid for a year.—*Withering.*

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN a work like unto yours, the intention of which is to communicate new and valuable information to the medical world, I am vexed to see papers occasionally introduced, the writers of which appear to have no other object than that of seeing themselves in print. But they should recollect, that the Readers of your Journal ought, and do expect from every writer in it, something original, or at least interesting, in the sciences to which it is particularly appropriated.

Every man who has determined upon employing his pen on any subject in medicine, should first take pains to inform himself of whatever has previously been written respecting it; in order that he might avoid the imputation of being a Copyist, and of publishing as original, what is only so to himself. If, when he has done this, he feels satisfied that what he has to communicate will afford information to scientific men, your valuable Miscellany then becomes a desirable channel for transmitting it to such a class of Readers.

In the last Number of your Journal, I met with a paper on Rheumatism, by Mr. Carter; and having been a great sufferer from the acute species of that disease, I was in hopes to have found something in it that would have satisfied a curiosity, principally excited by many days and nights of extreme suffering, or a remedy by which to palliate its future attacks. Disappointed however in both, I could not but ask, for what purpose can Mr. Carter have written

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written these Observations, and sent them forth to a Medical Public? If it was with a view of informing them of the symptoms, causes, or method of cure of this painful, and oftentimes tedious disease, I think he has sadly overrated his own talents, and betrayed a mean opinion of their abilities and information.

No one, who has read Cullen, can read Mr. Carter's description of the symptoms of Rheumatism, without immediately perceiving that they are copied, and frequently almost verbatim, from that learned Professor. With respect to the causes of the disease, I do not see that there is any thing in Mr. Carter's observations, that is not likewise mentioned by Dr. Cullen; both are of opinion, that the most common is cold, generally or partially applied to the surface of the body. Mr. C. however, objects to what Cullen "has written concerning the cause," as to him it "appears to be unsatisfactory," and thus explains the Modus Operandi of heat and cold.

"When the body is acted upon by any great stimulus, the sudden abstraction of it is attended with dangerous consequences. Thus the excitability being acted upon by the stimulus of heat, in a considerable degree produces an accelerated motion in the fluids, and rouses up action in vessels which were before torpid. Now cold, which is an abstraction of stimulus, being suddenly applied, must arrest and detain a quantity of fluids in the vessels. By the application of cold, the action of the heart and arteries is weakened, the humours which are arrested in the extreme small vessels have a tendency to putrefaction, the juices become acrid, and irritate the parts, whence proceed the inflammation, pain, and other symptoms of the Rheumatism."

I shall now transmit what is written by Cullen, and objected to by Mr. Carter, that your readers may judge whether they differ as to the operation of cold as a cause for producing this disease. "In the case of Rheumatism, I suppose that the most common remote cause of it, that is, cold applied, operates especially on the vessels of the joints, from these being less covered by a cellular texture than those of the intermediate parts of the limbs. I suppose further, that the application of cold produces a constriction of the extreme vessels on the surface, and at the same time an increase of tone or phlogistic diathesis in the course of them, from which arises an increased impetus of the blood, and at the same time a resistance to the free passage of it, and consequently inflammation and

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pain. Further, I suppose that the resistance formed, excites the vis medicatrix to a further increase of the impetus of the blood; and to support this, a cold stage arises, a spasm is formed, and a pyrexia and phlogistic diathesis are produced in the whole system."

I have now only to notice the method of cure proposed by Mr. Carter; and here I am surprized to find, not one remedy suggested that is not mentioned by Cullen, either as to internal medicines or external applications. There being then, nothing the least novel or instructive, as it regards either the symptoms, causes, or method of cure, I trust I may be allowed to ask, why Mr. C. published his Observations on Rheumatism? It is not my intention to censure these observations, as their Author has in Cullen great authority for what he has compiled; but to point out to him the inutility of publishing in your Journal what every one, at all conversant in the practice of medicine, must have known. Cullen's work seems to have been his only text book, for he appears to be unacquainted with subsequent Authors, and a method of cure which, in most cases of acute rheumatism that occur in the metropolis, very much shortens the duration of the disease. But this is a subject on which it is not now my intention to enter. My wish is to discourage that great desire of writing, which prompts men to become Authors, and unwittingly committing themselves, to prevent the insertion of such papers as the one I have noticed, and thus to render your valuable Journal still more so to every one who is, like

Your's, &c.

Sept. 14, 1808. A CONSTANT READER.

An Account of the Examination of the Body of a little Boy, who died of the HYDROPHOBIA; *intended to show the probable Success of Dr.* PHYSICK'S *Proposal for preventing Death by making an artificial Opening into the Windpipe. By* BENJAMIN RUSH, *M. D. Professor of Medicine in the University of Pennsylvania.*

IN the first number of the fifth volume of the American Medical Repository, Dr. Physick has supposed death from Hydrophobia to be the effect of a sudden and spasmodic constriction of the glottis, inducing suffocation, and that it might be prevented by creating an artificial passage for air

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air into the lungs, whereby life might be continued long enough to admit of the disease being cured by other remedies. The following account of a dissection is intended to show the probability of the Doctor's proposal being attended with success.

On the 13th of September, 1802, I was called, with Dr. Physick, to visit, in consultation with Dr. Griffitts, the son of William Todd, Esq. aged five years, who was ill with the disease called Hydrophobia, brought on by the bite of a mad dog, on the 6th of the preceding month. The wound was small, and on his cheek, near his mouth; two circumstances which are said at all times to increase the danger of wounds from rabid animals. From the time he was bitten he used the cold bath daily, and took the infusion, powder, and seeds of the Anagallis, in succession, until the 9th of September, when he was seized with a fever, which at first resembled the remittent of the season. Bleeding, purging, blisters, and the warm bath were prescribed for him, but without success. The last-named remedy appeared to afford him some relief, which he manifested by paddling and playing in the water. At the time I saw him he was much agitated, had frequent twitchings, laughed often; but with this uncommon excitement in his muscles and nerves, his mind was unusually correct in all its operations.

He discovered no dread of water except in one instance, when he turned from it with horror. He swallowed occasionally about a spoonful of it at a time, holding the cup in his own hand, as if to prevent too great a quantity being poured at once into his throat. The quick manner of his swallowing, and the intervals between each time of doing so, were such as we sometimes observe in persons in the act of dying of acute diseases. Immediately after swallowing water, he looked pale, and panted for breath. He spoke rapidly, and with much difficulty. This was more remarkably the case when he attempted to pronounce the words Carriage, Water, and River. After speaking he panted for breath in the same manner that he did after drinking. He coughed and breathed as patients do in the moderate grade of the cynanche trachealis. The dog that had bitten him, Mr. Todd informed me, made a similar noise in attempting to bark a day or two before he was killed. We proposed making an opening into his windpipe. To this his parents readily consented; but while we were preparing for the operation, such a change for the worse took place, that we concluded not to perform it. A

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cold sweat, with a feeble and quick pulse, came on; and he died suddenly, at 12 o'clock at night, about six hours after I first saw him. He retained his reason, and a playful humour, till the last minute of his life. An instance of the latter appeared in his throwing his handkerchief at his father just before he expired.

The parents consented to our united request to examine his body. Dr. Griffitts being obliged to go into the country, and Dr. Physick being indisposed, I undertook this business the next morning; and, in the presence of Dr. John Dorsey, (to whom I gave the dissecting knife) and Mr. Murduck, I discovered the following appearances:— All the muscles of the neck had a livid colour, such as we sometimes observe, after death, in persons who have died of the sore throat. The muscles employed in deglutition and speech were suffused with blood. The epiglottis was inflamed, and the glottis so thickened and contracted as barely to admit a probe of the common size. The trachea below it was likewise inflamed and thickened, and contained a quantity of mucus in it, such as we observe now and then, after death, from cynanche trachealis. The œsophagus exhibited no marks of disease; but the stomach had several inflamed spots upon it, and contained a matter of a brown appearance, and which emitted an offensive odour.

From the history of this dissection, and of many others in which much fewer marks appeared of violent disease in parts whose actions are essential to life, it is highly probable that death is not induced in the ordinary manner in which malignant fevers produce it, but by a sudden or gradual suffocation. It is the temporary closure of this aperture which produces the dread of swallowing liquids: hence the reason why they are swallowed suddenly, and with intervals, in the manner that has been described; for, should the glottis be closed during the time of two swallows, in the highly inflamed state of the system which takes place in this disease, suffocation would be the immediate and certain consequence. The same difficulty and danger attend the swallowing saliva, and hence the symptom of spitting, which has been so often taken notice of in Hydrophobia. Solids are swallowed more easily than fluids, only because they descend by intervals, and because a less closure of the glottis is sufficient to favour their passage into the stomach. This remark is confirmed by the frequent occurrence of death in the very act of swallowing, and that too with the common symptoms of suffocation.

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tion. To account for death from this cause, and in the manner that has been described, it will be necessary to recollect that fresh air is more necessary to the action of the lungs in a fever than in health, and much more so in a fever of a malignant character, such as the Hydrophobia appears to be, than in fevers of a milder nature. An aversion from swallowing liquids is not peculiar to this disease. It occurs occasionally in the yellow fever. It occurs likewise in the disease which has prevailed among the cats both in Europe and America, and probably in both instances from a dread of suffocation in consequence of the closure of the glottis, and sudden abstraction of fresh air.

The seat of the disease, and the cause of death, being, I hope, thus ascertained, the means of preventing death come next under our consideration. Tonic remedies, in all their forms, have been administered to no purpose. The theory of the disease would lead us to expect a remedy for it in blood-letting. But this, though now and then used with success, is not its cure; owing, as we now see, to the mortal seat of disease being so far removed from the circulation as not to be affected by the loss of blood in the most liberal quantity. As well might we expect the inflammation and pain of a paronychia, or what is called a felon on the finger, to be removed by the same remedy. Purging and sweating, though occasionally successful, have failed in many instances; and even a salivation, when excited, (which is rarely the case) has not cured it. An artificial aperture into the windpipe alone bids fair to arrest its tendency to death, by removing the symptom which generally induces it, and thereby giving time for other remedies, which have hitherto been unsuccessful, to produce their usual salutary effects in similar diseases.* In removing faintness, in drawing off the water in ischuria, in composing convulsions, and in stopping hæmorrhages in malignant fever, we do not cure the disease, but we prevent death, and thereby gain time for the use of the remedies which are proper to cure it. Laryngotomy, according to Fourcroy's advice, in diseases of the throat which obstruct respiration, should be preferred to tracheotomy, and the incision should be made in the triangular space between the thyroid and cricoid cartilages. Should this operation be

* The hoarse barking, or the total inability of mad dogs to bark, favours still further the idea that the mortal seat of the disease is in the glottis, and that the remedy which has been proposed is a rational one.

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be adopted in order to save life, it will not offer near so much violence to humanity as many other operations. We cut through a large mass of flesh into the bladder in extracting a stone. We cut into the cavity of the thorax in the operation for the empyema. We perforate the bones of the head in trepanning; and we cut through the uterus, in performing the Cæsarian operation, in order to save life. The operation of laryngotomy is much less painful and dangerous than any of them; and besides permitting the patient to breathe and to swallow, it is calculated to serve the inferior purpose of lessening the disease of the glottis by means of local depletion. After an aperture has been thus made through the larynx, the remedies should be such as are indicated by the state of the system, particularly by the state of the pulse. In hot climates it is, I believe, generally a disease of feeble re-action, and requires tonic remedies; but in the middle and northern States of America it is more commonly attended with so much activity and excitement of the blood vessels, as to require copious blood-letting and other depleting remedies.

Should this new mode of attacking this furious disease be adopted, and become generally successful, the dicovery will place the ingenious gentleman who suggested it in the first rank of the medical benefactors of mankind.

Before I conclude my letter, I have only to add a fact which may tend to increase confidence in a mode of preventing the disease, which has been recommended by Dr. Haygarth, and used with success in several instances. The same dog which bit Mr. Todd's son, bit, at the same time, a cow, a pig, a dog, and a black servant of Mr. Todd's. The cow and pig died; the dog became mad, and was killed by his master. The black man, who was bitten on one of his fingers, exposed the wound for some time, immediately after he received it, to a stream of pump-water, and washed it likewise with soap and water. He happily escaped the disease, and is now in good health. That his wound was poisoned is highly probable, from its having been made eight hours after the last of the above animals was bitten, in which time there can be but little doubt of such a fresh secretion of saliva having taken place as would have produced the hydrophobia, had it not been prevented by the above simple remedy. I am not, however, so much encouraged by its happy issue in this case as to advise it in preference to cutting out the wounded part. It should only be resorted to where the fears of a patient, or his distance from a surgeon, render it impossible to use the knife.

ROYAL

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ROYAL JENNERIAN SOCIETY.

Salisbury Square, August 19, 1808.

THE Royal Jennerian Society for the extermination of the small-pox having received information that considerable alarm had been excited by reports of supposed failures in vaccination at Cambridge, requested the favour of Mr. Ring and Mr. Blair to proceed thither immediately, for the purpose of investigating those reports. In this request of the Society the above gentlemen readily acquiesced; and they have since laid before the Board of Directors a particular statement, of which the following is a general abstract.

General Result of an Inquiry into the unfavourable Reports concerning Vaccination at Cambridge, by the Deputation of the Royal Jennerian Society, August 5th, 1808.

The small-pox has been very prevalent and very fatal at Cambridge, for ten weeks past; during which period a considerable number of children, vaccinated at different times, have been much exposed to the infection of that disorder, which they have perfectly resisted.

In many instances, however, the small-pox was supposed to have occurred after vaccination; in some of which all doubts had been removed: but sixteen cases were deemed still deserving of investigation,

These cases may be divided into two classes: one, containing those in which there was no regular and complete vaccination; the other, those where the patients have not had the small-pox.

In some instances, vaccination did not take place in a satisfactory manner; yet these were reckoned among the failures in vaccination, by persons who were prejudiced against the practice.

In several examples there was only a festering of the arm; or the pock was essentially injured, and the security of the patient thereby diminished. In others, which fell under the observation of two respectable practitioners at Cambridge, and of the deputation who accompanied them, the chicken-pox was mistaken for the small-pox. In confirmation of this remark it is necessary to state, the chicken pox, as well as the small-pox, has for some time been, and still is, very prevalent at Cambridge.

In two cases, the patients were inoculated for the *small pox* in the manner of a *seton*, "by a bone-setter, who was

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was formerly a grocer," together with two of his own children; and a festering of the arms was produced. About a month ago, when the small pox appeared in these four cases, and proved fatal in one of them, he was applied to; then, and not till then, he pretended that he had not inoculated the children for the small pox, but for the cow pock!

When a child was inoculated for the cow-pock without effect, and afterwards successfully inoculated for the small-pox, this was represented to be *a failure in Vaccination!* and when another child, who had been vaccinated, was afterwards seized with a fever *without eruptions*, this also was represented to be *a failure in Vaccination!*—Having such prejudices to encounter, it is no wonder that the failures in this practice at Cambridge were supposed to be frequent; but, after a minute and careful inquiry into the circumstances which had excited so general an alarm, it did not appear that a single case of the small pox occurred there, after regular and complete vaccination.

In this inquiry the deputation of the Royal Jennerian Society were assisted by two eminent surgeons at Cambridge, who have had a considerable share in the practice of vaccination, one of them having vaccinated THREE THOUSAND PERSONS; and the notes of every case, submitted to their investigation, were read to the parents themselves, or the parties concerned, to prevent the possibility of mistake.

JOHN RING.
WILLIAM BLAIR.

A particular statement of the cases of supposed failure here alluded to, and the original minutes on which that statement is founded, may be inspected by any medical man, on application to Dr. Knowles, Resident Inoculator of the Society, at their Central House, No. 14, Salisbury Square.

By Order of the Board of Directors.
CHARLES MURRAY, Secretary.

CRITICAL

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

A General View of the Natural History of the Atmosphere, and of its Connection with the Sciences of Medicine and Agriculture; including an Essay on the Causes of Epidemical Diseases. By HENRY ROBERTSON, M. D. Edinburgh, 2 vol. 8vo 1808.

THE importance of the subject, announced in these Volumes, is every day more strongly confirmed; and it would be ungrateful not to acknowledge our obligation for the diligence evinced by the author. We shall generally announce the contents of the whole, and analyze only that part of it which is more immediately connected with the inquiries of our readers.

The first volume opens the subject with an account of the general properties of light, heat, and electricity. After this follows a chapter on the physical properties of the atmosphere, under the description of its colour, fluidity, density, and elasticity, including some remarks on akoustics.

The gravity of the air, variations of the barometer, and their causes as far as ascertained. Temperature of the atmosphere and causes of varieties of climate, &c. Supposed change of climates in certain countries.

Meteorology is next considered, compredending spontaneous evaporation and its causes. Rain, snow, hail, water-spouts, and other meteors connected with the existence of water in the atmosphere—of winds—of luminous meteors, of the rainbow, of the parhelion, au parselene, or mock-sun and moon, of halos,—of electrical meteors, fire balls, shooting or falling-stars, aurora borealis,—of phosphorescent meteors, ignis fatuus,—thunder stones,—prognostics of the weather.

The second volume commences with a chapter on the chemical properties of the atmosphere, and comprehends, besides general remarks, eudiometry—combustion—substances formed by the combination of oxygen and azotic gases—oxygen gas—nitrogen gas—carbonic acid gas—combination of the constituent gases in the formation of the atmosphere—respiration—the temperature of living bodies. The influence of the atmosphere on growing plants, germination, vegetation,—the influence of the atmosphere on animal and vegetable remains.

These considerations lead our author to some general observations on the influence of climate on animals and plants, as well as the influence of atmospheric temperature, and different states of gravity,

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vity, of the variations of humidity, and different degrees of electricity.

The last chapter is on the influence of extraneous matters in the atmosphere on animals and plants. As we presume most of our readers have paid sufficient attention to the more established laws of the atmosphere, we shall confine ourselves to the author's remarks on epidemic contagion and marsh effluvia.

In considering the causes of contagion, the author's first object is to investigate the supposed influence of the atmosphere in *engendering* epidemical diseases; next, to enquire into those matters which are supposed to have the same powers; and, thirdly, to consider the influence of the atmosphere in propagating their effects.

It is first remarked, that no author who has imputed epidemical diseases to a peculiarity in the nature of the atmosphere, has ever attempted to describe the supposed alteration in the qualities of the air to which the disease may be attributed. "Parey, we are told, imputes the occurrence of plague to an alteration in the natural properties of the air, without giving a precise definition of them; but as he also talks of its putrefaction as arising from the exhalations of other matters, his opinion cannot be therefore regarded on this subject as decided. But that a change of the properties of the air, independent of the mixture of any accidental impurities, was generally esteemed as giving origin to epidemical disorders, and continues down to the present time, may be collected from many authors who have written on this subject. The following quotation from Mindererus is therefore selected, as affording the mostdistinct view of this opinion: he says, when treating of the plague, 'Longe porro communior pestis causa esse solet aër; non is veneno quidem aut putredine vitiatus, sed inordinata primarum qualitatum subsecutione noxius, utpote cum is modo in calidum, modo in frigidum, aut siccum declinans. fortuito quasi eventu, multoque temporis habito respectu ac ratione, præpostero plane ordine, nunc in hieme calet, nunc friget in æstate.' Dr. Maclean, in the Appendix to his View of the Science of Life, p. 20, in treating of this question, observes, 'Certain states or vicissitudes of the atmosphere, together with the application of other powers, producing indirect debility, are the cause of all epidemic and pestilential diseases which affect the same person more than once during life, and have hitherto been reputed contagious. In page 180, of Dr. Arbuthnot's Essay on the Effects of Air, this learned physician advances the following opinion respecting this question: 'Whether the air is capable of producing the plague without infection, in a place where it is not an endemical disease? I think the affirmative is very probable; for, 1st, In a country where it is both an indigenous and endemical disease, it must be probably owing to some particular quality of the air; 2dly, It has been proved, that there is hardly any alteration, even to the utmost degree of putrefaction, but may be produced by the enormities, combinations, and alterations of the common qualities of the air; and that still more extraordinary

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traordinary effects may be produced from some contagion from the air, by uncommon effluvia from bodies near the surface of the earth.' The greater part of the chapter contains arguments in support of this doctrine; but, like almost every author who has assumed this side of the question, the Doctor is by no means sufficiently accurate in making a distinction between the natural effects of the changes of the physical properties of the atmosphere, and of the effects of such matters as may be occasionally mixed with it. In Dr. Adams's elaborate work on Animal Poisons, the same obscurity pervades the investigation of this subject: in page 320, he mentions, as a cause of fever, 'a state of the air in its cause, unconnected with living animals, but equally affecting all who come within its influence, as intermittents from marsh miasmata, influenza, or any other endemic or epidemic disease.' In page 354, of the same work, he continues, 'If what we have said be admitted, it will follow, that fever from infectious atmosphere is to be ascribed to the confined effluvia from living bodies,—the yellow fever from the effluvia of putrid animal or vegetable matter exposed to a hot sun, and the plague to the latter, joined to an epidemic constitution of the air; that in all, a *fomes* may excite the disease; yet we are not certain, whether a diseased subject is contagious, unless in a certain atmosphere.' In such terms, he admits the existence of contagion, and seemingly attributes a power of equal influence to the atmosphere also.

"But the effect that may be supposed to be produced by any alteration of the atmosphere in the manner thus pointed out, would certainly rather tend to excite such diseases as generally arise from variations of the climate. It is impossible to comprehend, how a change in the physical properties of the atmosphere, capable of engendering any general disease, should take place, without other circumstances connected with that change upon other bodies becoming manifest. Were the above opinion correct, this must have been always the case, considering the variety of such diseases. Neither is it easy to conceive, how an alteration in the constitution of the air, rendering it so virulent as to occasion any pestilential disorder, should not affect every one at nearly the same time; as, in every condition of the atmosphere, it must act upon man, and all respiring animals, in nearly a similar manner: therefore, did any epidemical malady really originate from this cause, few or none could escape its malignity; and the brute creation must have been in that case equally afflicted by it as mankind. But Plenciz assures us, from the result of long experience, that the epidemical diseases of cattle are rarely or never communicated to their herds, or even to their dogs: in this general observation, hydrophobia is to be excepted. On the other hand, it requires no authority to demonstrate, that the diseases of man are never transferred even to domestic animals. A full investigation, in proof of these remarks, is to be found in the preface to Muratori's work on the Management of the Plague."

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It is impossible not to arrest our readers, in order to set Dr. Robertson somewhat to rights in this passage. If Parey imputes the occurrence of plague to an alteration in the properties of the air, he only does so because he could find no other cause; nor was it by any means to be expected that he should ascertain what that change is, any more than what is the nature of small-pox, or other contagious effluvia. Mindererus seems to acknowledge himself equally in the dark, or else to cover his ignorance by the obscurity of his terms. Maclean, perhaps, speaks with too much authority, but without pretending to detect causes for what is not yet the subject of experiment. The accusation against Dr. Arbuthnot seems more reasonable, as it must be admitted that he has confused what may be a mere production of the air with what may be floating within it. But in the quotation from Dr. Adams, we find a distinction made between a bad state of the air, *unconnected with living* animals, air rendered infectious *from the effluvia of living* animals, and air *impregnated with the effluvia of dead animal or vegetable matter exposed to a hot sun*, and the combination of the latter with a *pestilential state of the atmosphere*. It is remarkable too, when this author doubts whether the diseased subject is contagious, but admits an infectious property in the air, and, consequently, in substances imbued with it, that Dr. Robertson should draw so strange a conclusion, and in terms so little intelligible. "In such terms, says our author, he admits the existence of contagion, and seemingly attributes a power of equal influence to the atmosphere also."

The last conclusion, that the diseases of man are never transferred to brutes, and vice versa, however strengthened by Muratori, comes in most unfortunately for Dr. Robertson, in whatever shape he may please to put it. If he wishes to prove that the atmosphere cannot be deleterious without affecting brutes also, it cannot be necessary to remind him, that many pestilential diseases have begun with cattle; and as to contagions, we need not remind him of the cow-pox, as he himself admits hydrophobia.

Some further remarks follow, on the dreadful epidemic which desolated Gibraltar and other parts of Spain. This the author imputes, but we think without sufficient authority, to a communication of the infected with other districts. How much it is to be regretted, that our accounts of this most important event, are still so imperfect. As to what is said of the partial manner in which individual cantons escaped the disease, we cannot help thinking this would tend to prove that the whole must depend on the peculiarities of the air, because it is inconceivable that such districts should be more religiously preserved from intercourse with the infected, than others which have suffered.

The author next adverts to seasons, and shows that the plague has appeared in all seasons, in different parts of the world. This should have been stated with more discrimination. In those parts of the world in which the seasons are regular, the plague has usually

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ally begun in spring; and in Egypt, always ceases at Midsummer. In England it has usually begun in autumn, and its cessation has been as uncertain as might be expected in such a climate as ours. If the commencement of plagues has been sometimes dated in the winter, there is reason to believe they were of a different character from the true plague, and only acquired their name from their epidemic and destructive properties.

Some remarks follow, on the opinions of various writers, who have denied the contagious property of the plague. Noah Webster, it is said, concludes his remarks in terms similar to those who have thought differently.—His opinion, therefore, goes for nothing with our author; and as Assalini gives a precise account of the great pains he took to preserve himself, this, we are told, shows the absurdity of his opinion, that such pains were unnecessary. Further remarks follow, on Dedier, Chiconeau, and Moseley. In answer to all these, illustrations are brought of the manner in which particular classes or orders of society were obnoxious to, or escaped other diseases which are admitted to be contagious. We could have been glad if our author had produced any race, order, society, or age, or more than a few solitary instances of idiosyncracy, to whom small-pox had not been as general, and even destructive as to any other part of mankind. A quotation follows from Dr. Russel, whose opinions on this subject are well known, and must ever be respected.

Several instances are selected from a variety of authors, historical and medical, to show, that from vapours and effluvia fevers have arisen; but we are not informed on the authority of the same authors, whether the subjects, thus infected themselves, became contagious to others, even when the contaminated air has been conveyed by a fomes. Several instances, however, follow, of "disorders resembling the very worst forms of epidemics which have appeared without the immediate application of one specified cause, but which seem to have been owing to the combined influence of several agents, and to be afterwards propagated by the emanation of a peculiar matter generated in the course of the disorder." In this way, continues our author, fevers of the most malignant description have been generated in besieged towns, ship-board, jails, hospitals, and wherever people are much crowded. We cannot help remarking, that if such a malignant air is spread through every part of a ship, a town, hospital, or jail, it will be extremely difficult to determine whether individuals are infected by each other, or by the general state of the atmosphere. This part of the subject concludes with some remarks, that the original type of a fever, excited by miasma, is sometimes altered, so as to become infectious. If we understand our author, his meaning is, that any epidemical or endemical disease, by the accumulation of numbers of sick, will produce such a change in the air, as to render it injurious, and excite the hospital or jail fever in those who breathe it. All this is undeniable, but it does not necessarily follow, that

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such sick individuals, freed from their clothing and well washed, or rather that individuals who have sickened by remaining so short a time in this air, that their clothes would not become sufficiently imbued to prove a fomes, should, by their own secretions, become infectious. And it must be admitted, that no combination of animal effluvia, under any other circumstances of disease, has been accused of generating small-pox, or any other known and universally admitted contagion.

Having thus examined what has been done by his predecessors, Dr. Robertson proceeds to give his own opinions of the sources of epidemic diseases. The first of these, which he considers as most immediately inimical to the living body, is the effluvia arising from the remains of putrid animal matter in a certain state of decay. Of the danger of this, however, he gives no particular instances.

"The second source, continues Dr. Robertson, that gives rise to matters which produce general epidemic diseases, is an accumulation of the usual exhalations from the living body. These being confined within a limited space, enter into new combinations, generating a matter of the most noxious properties. This appears likewise in an aëriform state; and there are frequent instances of it having almost instantly deprived people of life. This appears from the relation we have of the Black Assize at Oxford, and the dreadful sufferings of those confined in the black hole at Calcutta. It is probably owing to the co-operation of this and the former causes, that epidemics of the worst species are generated; and, except in a few instances, this, perhaps, never acts alone: and when combined with other causes, the plague is even generated in places otherwise favourable for its appearance. The contagious diseases that break out in besieged towns likewise appear in consequence of their union. At the same time, there is every reason to suppose, that this cause also frequently acts as a solitary agent. In this way, it is to be considered as the cause of an endemic or local disease."

On this passage, we shall only remark, that, of the Oxford Black Assize, the most authentic accounts assure us that no persons were taken ill excepting those who were in court; that is, that those who were infected by the pestilential effluvia, did not infect any of those who nursed or attended them, nor indeed any other person. What the former causes, mentioned by our author, allude to, we pretend not to determine.

The third, and most pregnant source of epidemic disorders, we are told, is the matter arising from persons under particular diseases. "It is to [by] contagion alone, that certain specific diseases are produced, as small-pox, scarlet fever, typhus, plague, &c. Here again we feel ourselves much at a loss, because, though we have every certainty that can be required, that the small-pox cannot be produced but by its own contagion; and that its own contagion will almost invariably produce it in those who have not previously passed through it: yet of the plague we have no such certainty. Of the plague also, we are satisfactorily informed that the

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the having once passed through it, is no security against a future attack; and also that a diseased subject is never contagious, but at certain seasons, and in certain places.

We have made thus free with this part of Dr. Robertson's work, because the subject is so highly important as to deserve particular attention to every thing connected with it. While, however, we thus differ in opinion from our author, we are ready to give him great credit for the assistance we have received from him, in his numerous references, and the diligence which he has evinced in every other part of his undertaking.

Dr. Willan, on the Skin.

(Concluded from our last.)

ORDER IV. " Bullæ (Bleb,) definition XI, (so we have copied from the passage before us, but among the definitions it will be found IX) a large portion of the cuticle detached from the skin by the interposition of a transparent watery fluid. Soon after the water is discharged, the excoriated surface is covered with a flat yellow, or black scab, which remains till a new cuticle is formed underneath. When *Bullæ* have a dark red livid base, they are denominated *phlyctenæ.*"

Of this order, continues Dr. W. I have constituted three genera, Erysipelas, Pemphygus, and Pomphylox. Whether the two latter might be properly united, or whether the Pemphygus should be considered a distinct idiopathic eruptive fever, I do not wish absolutely to decide, but wait for the opinion of judicious critics.

Every one must be pleased with the modesty of this last paragraph.—But we believe most readers, like ourselves, have been in expectation that the question would be solved by the systematic writer whose accuracy we have so often admired, and whom, in the progress of his labours, we have followed till we see him arrived at *Pemphygus.* We shall not, however, anticipate what will naturally suggest itself in the course of our remarks on this number. In these we shall be less reserved, because our known regard for the talents of Dr. Willan, and the useful manner in which he has employed them, will free us from any suspicion of severity; and, because, as we before remarked, the nature of our publication will afford him an opportunity of setting us right if we mistake him.

" The erysipelas is defined a febrile disease, in which some part of the body is affected externally with heat, redness, swelling, and vesications. The tumour is soft, diffuse, and irregularly circumscribed; the redness disappears on pressure, and immediately returns when the pressure is removed."

" Medical and chirurgical writers generally agree in their statements of the characteristics of erysipelas. Ancient authors, however, appear more anxious to distinguish it from phlegmon, than to give a minute history or description of it. According to Galen," heat and tumefaction are symptoms common to both diseases, but

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the colour of them is different: that of phlegmon being a vivid permanent red; that of erysipelas, a pale red, inclining to yellow, easily obliterated by the touch of the finger. In phlegmon, the tumour is *circumscribed*, hard, tensive, and painful: in erysipelas, it *extends diffusely* with considerable heat and uneasiness, but without tension or throbbing. Phlegmon is seated deep in the flesh, whereas erysipelas does not penetrate far below the skin.—He adds, that erysipelas is in some cases attended with ulceration; that in others it has a tendency to gangrene, and he thinks with Hippocrates, that it often affects internal membranes as well as the skin." To this account of Galen, is added a note containing his distinctions, founded on his theory of the four humours; but the most important part, is his remarks of the manner in which Erysipelas sometimes approaches Phlegmon, and Phlegmon Erysipelas. Some observations follow, on Serapion and Avicenna; after which, we are informed, that "without being influenced by the hypothesis or opinion of Galen, it is the author's intention to divide Erysipelas under four varieties; E. phlegmonodes; E. œdematodes; E. gangrenodes; and E. erraticum."

There cannot be a doubt that an author of Dr. Willan's judgment and celebrity, has an undoubted right to form his own plan, uninfluenced by Galen or any other writer: but where words are adopted, if they have already an appropriate meaning, that meaning should be referred to; or if they are intended as arbitrary terms, the reader should be apprised of the author's object. Galen's distinction between phlegmon and erysipelas was quoted, we presume, for some purpose, probably to guide the reader in comprehending the term phlegmonodes. If so, he should have been informed of it.

By this time, we are fearful our readers will suspect us of unnecessary preciseness, and, perhaps, with reason. But it is time we should explain ourselves.

As Dr. Willan's professed object is with the skin, it may be justly urged that phlegmon being unconnected with that membrane, made no necessary part of his work. But it now appears that the laws of inflammation must be somewhat inquired into, in order to ascertain the distinctions alluded to between phegmon and erysipelas, and also the approximations of each. Galen's description is certainly sufficiently accurate, and we should be satisfied with it if we could collect that our author is so. Celsus also, in the passage to which we are referred, has some useful remarks, though less pointed in his description. Both of them agree with most other writers, that the phlegmonous inflammation is deeper than the surface, that the erysipelatous is for the most part superficial. That the former is circumscribed, whilst the latter is diffused, and continues to spread. That the one is disposed to suppuration, which it early shows by a throbbing pain: that the other rarely suppurates; but sometimes, if it remains superficial, ulcerates; or if it has extended deeper, sphacelates.

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Here we shall stop for a moment to indulge a few reflections of our own. And, first, let us remark with the celebrated Cullen, how impossible it is to avoid forming some theory, or some generalization of facts, whenever we mean to convey practical knowledge to others. For want of this, without impeaching the accuracy or industry of Dr. Willan in this important division, we fear the student, after perusing the whole, will retain but little, either for want of some established laws, by which he may judge for himself under every various appearance; or, if he cannot trust to his judgment for want of some aphorisms, which may enable him to refer to his memory.

It may be asked, what is all this to the purpose? We answer, that as soon as we attempt to follow our author in his first division, "Erysipelas phlegmonodes," we cannot help wishing to learn some practical *distinction* from himself, concerning *Phlegmon*, to which we suppose this variety of erysipelas makes some approaches; and as we conceive medicine has derived some advantages since Galen's time, we could have wished for *distinctions* somewhat more recent. It is true, that with the ancients, the *terms* phlegmon and erysipelas, were deduced from their comparative heat and colour. Mr. Hunter, who examined every thing as far as his senses would permit, discovered that the difference between these two inflammations, consisted in certain actions, by which one *confined* the disease by forming an adhesion with coagulated lymph, whilst the other, for want of this provision, spreads and throws out only serum. The first, therefore, he called the *adhesive* inflammation. This is the phlegmon of the Greeks, and may be called inflammation, so conducted by the constitution or parts, as to prevent its spreading, or the diffusion of any extravasated fluids. Erysipelas, on the contrary, is confined by no coagulated lymph, and the serum which is extravasated, is diffused into the cellular substance. By erysipelas phlegmonodes then, we conceive must be meant that kind of erysipelas which approaches nearest to the adhesive inflammation, or which soonest assumes that action, and as the phlegmonic, or adhesive, is the most favourable form of inflammation, the business of art should be to conduct erysipelas to that form. This consideration obliges us for the present to pass over a great deal of Dr. Willan, till we meet him again under the subject of treatment. "All the ancient writers says he, except Galen, recommend blood-letting as the principal remedy in erysipelas."

It is enough for us if we have Galen and Celsus to keep company with Mr. Hunter. In the treatment of diseases, the ancients generally had the more violent stages in view. Probably they were rarely consulted in others. In such, blood-letting is often necessary, because, though erysipelas is, for the most part, the consequence of a state which possesses not powers equal to the adhesive inflammation, yet it sometimes arises from a peculiarity of constitution in other respects healthy. This distinction is admirably marked by Celsus. Interdum vel ex *nimia inflammatione* vel ob æstus

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ob æstus unmodicos, vel ob nimia frigora; vel quia *corpus scæle* aut *mali habitus* est, cancer * occupat. By this, we see how correctly Celsus had discovered that erysipelas might be merely too high action, which, if continued, must end in gangrene, as he afterwards shows; yet it might also be the effect of an attempt at phlegmonous inflammation in an aged or enfeebled habit. His mode of practice therefore, relates to both.—Oportet *si vires patiuntur* sanguinem mittere.

We have just offered these general remarks on the distinction between the two species of inflammation, to show, that in our opinion the ancients were not much mistaken when they appear more anxious to distinguish erysipelas from phlegmon, than to give a minute history or description of it. For the same reason, Mr. Hunter in his elaborate Treatise on Inflammation, confines himself principally to the adhesive, considering, that by a perfect knowledge of its laws, every deviation from it would be best understood. Erysipelas is the most common deviation, yet the forms of which are so various, that we are obliged to Dr. Willan for tracing them. But under every form, excepting in the single instance alluded to, erysipelas must be considered as increased action without strength to support it. The business of art is therefore to increase the strength of the patient by every means that are not directed to increase action, always keeping in view that as the most favourable kind of erysipelas, is that which approaches nearest to adhesive inflammation; (for such, we conceive, must be the meaning of erysipelas phlegmonodes) so all our endeavours are to be directed to inducing such a change. In order to produce this favourable issue, after blood-letting, *if the patient's strength will bear it*, the practice of Celsus, which was chiefly local, may seem severe, and as it is now out of use, it would be difficult to give an estimate of its success. Mr. Hunter's practice, it appears, was the exhibition of bark internally, in which he was supported by that experienced and sagacious practitioner, G. Fordyce.—Dr. W's extracts from Garthshore, Wells, and others, confirm the same.

Having made these general remarks, which we could not do without in some degree pursuing the disease and remedies through their whole progress, we shall proceed to describe the varieties from our author.

" Erysipelas phlegmonodes, says he, generally affects one side of the face, or one of the limbs. In the former case, the disease begins with coldness and shiverings, which alternate with irregular flushes of heat: on the 2d and 3d days, the pulse is increased in frequency, oppressed, and somewhat hard; the tongue is covered with a whitish crust; there is a sensation of languor, and general soreness, attended with thirst, loss of appetite, and a disposition to

* Cels. Lib. 5, cap. 31. Every reader knows, and the passage referred to teaches us, that erysipelas was with Celsus one species of cancer.

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to sleep. Dull aching pains are also felt in the head, neck, and back. The swelling usually appears in the second night, or on the third day, at the side of the nose, and on the cheek, or sometimes near the ear. It is of a dark red colour, smooth and soft, and attended with a sensation of heat and tingling. This redness, and the swelling, extend gradually over the side of the face, and spread, in some cases, to the scalp, and to the side of the neck, or upper part of the breast. The face then appears much disfigured; the mouth is drawn to one side; the eye-lids are turgid, and close up the eye; the symptoms of fever become more violent, and are attended with delirium. On the 4th and 5th day, vesications arise on different parts of the diseased surface, especially at the central part of the swelling. They have an irregular base, and are of various sizes. The fluid contained in them is at first clear and watery; it becomes afterwards straw-coloured and opaque, or sometimes slightly livid, without losing its transparency. Soon after the fluid has been discharged from the vesications, the excoriated surface is covered with a yellowish or black irregular scab. The bullæ usually break on the 5th or 6th day, when the swelling begins to subside, and assumes a yellowish hue. At this time also, there is a considerable remission of the fever. On the 8th day, both the fever and swelling generally disappear. I never saw this disease terminate fatally: it is, however, observed by authors, that some patients die in a comatose state on the 7th, 8th, or 9th day. When the redness changes to a brown or yellowish hue, a separation of the cuticle commences at the edges of the tumefaction, and is continued over the whole of it: a new cuticle is formed on the 10th day, and the scabs fall off about the same time."

Some varieties are next marked, and afterwards the disease described in its attacks on the lower extremities: under this last it appears to us, that in attending to other writers, the author has included the Barbadoes leg, or as it is now called, morbus glandularis. Erysipelas œdematodes seems the same as the former, excepting that there is still less disposition to terminate in the adhesive inflammation, in consequence of which, if the disease is violent, it continues to spread, and the serous effusion to increase till the brain is affected. Erysipelas gangrænosum, our readers will perceive, is only a higher degree of erysipelatous inflammation, with less power of supporting it.

Erysipelas erraticum is distinguished by the disease appearing in various parts of the body, under the form of red patches without any certain order. Under this division is placed that species of erysipelas which has been observed by Underwood, Broomfield, Dr. Garthshore, and some others, in young infants, and also those cases in which the inoculated small-pox and cow-pox have proved fatal, from their first insertion as well as some more general appearances after small-pox in the casual way. The question con-

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cerning the contagious property of erysipelas is left undecided by the author, but most of the authorities are produced.

On the subject of remedies Dr. W. very justly observes, that however sizy the blood may appear, it rarely happens but that repeated blood-letting increases the symptoms, and protracts the disease. Many physicians object to blisters; and certainly to cure a disease of vesication, high irritation, and tendency to gangrene, the application of canthandes may appear paradoxical. But Dr. W. very justly observes, that however improper they may be too near the disease, they may often be serviceable in diverting it from the face and scalp Leeches are also advised with the same caution. Saline medicines, preparations of antimony, compound powder of ipecacuanha, are offered for the choice of the reader. Hoffman and others are said to have over valued the effects of camphor and the dulcified acids in preventing too great determination of the blood to the head, and the reader is advised to consult Friend, from whom a long extract is offered on the propriety of repeate purges.

In erysipelas œdematodes, we are directed to employ blisters, diaphoretics, volatile alkali, and purgatives during the first three or four days, after which Peruvian bark and diuretics. Subjoined to volatile alkali is a quotation from Dr. Peart. We have no inclination to doubt the accuracy of that gentleman; but Dr. Willan's readers will expect his own practical remarks; had he informed us of them, it would have been enough to have acknowledged that he was indebted to Dr. Peart for the first hint on this subject.

In erysipelas gangrænosum, and erraticum, the great disposition to mortification points out the necessity of bark, without any question; mineral acids and opium in moderate doses are also recommended, and the general treatment as in malignant fever.

"The Pemphigus, says Dr. W. is an acute disease, characterized by an eruption of phlyctænæ, or vesications with an inflamed base, appearing in succession on different parts of the surface of the body, and sometimes in the mouth. It differs from erysipelas in its progress and duration, but it is more particularly distinguishable from that disease, as it does not exhibit any tumefaction, or redness, of the parts on which the vesications appear.

"The varieties of pemphigus, described by medical writers, may be arranged under the titles, Pemphigus vulgaris, Pemphigus contagiosus, and Pemphigus infantilis. Having never myself seen an instance of either of the former, I cannot do more than state what has been said respecting them by authors."

There is some variety in the description of different authors, as quoted by Dr. Willan; they all, however, speak of solitary cases. Sauvage of one from Seliger, and one in his own practice. Dr. Winterbottom, to us unaccountably, describes his case as occurring in the second day of an intermittent, yet the whole disease ceased as the eruption dried. Dr. Dickson's is contained in

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in the Memoirs of the Irish Academy. All these cases agree in the figure and size of the vesicle, the progress of the disease, and its favorable issue.

Pemphigus contagiosus is related in a paper by Dr. Langham, translated from the Acta Helvetica, which begins thus:

"Towards the end of the last winter, an epidemical disease of a very peculiar nature, hitherto undescribed and unknown, made its appearance in this country, and prevailed, through the whole succeeding summer, in so violent a degree, that all persons affected by it died. It was so highly infectious, that no person escaped it, who had for any length of time been exposed to the contagion; hence it spread through whole families, with great rapidity."

After this quotation the reader will join with us in praying. "*Di nobis talem avertite pestem.*" Happily, however, the Doctor contrived to cure some; for after explaining his mode of treatment he tells us, After health had been restored, I kept the bowels open for some days, &c. Though Dr. Langham thinks his disease has never been paralleled, (and in some respects he is perhaps right) yet Dr. W. very properly remarks, that in maliguant fever of all kinds, vesications have been frequently described; and probably, Dr. L's disease was only remarkable for such vesications being more general than usually happens.

"Pemphygus infantilis," as described by Dr. Willan, exhibits irregular oblong vesications or phlyctænæ, of a considerable size, and generally flattened at the top. They are at first small and transparent, but as they enlarge, the fluid contained in them assumes a purplish hue, and finally becomes turbid, from a slight admixture of pus. They are also surrounded by an inflamed border of a livid red colour. This eruption sometimes appears in infants two or three days after birth, on the neck, and upper part of the breast, on the abdomen, the groin, the scrotum, and inner part of the thighs. When the fluid is discharged, after the vesications break, the ulcerated surface is not disposed to heal, but spreads beyond its original boundary, and becomes extremely painful. As the vesications arise one after another in different places, and are all succeeded by ulcerations, the disease continues with little remission, for several days,—generally till the patient expires under the complicated distress arising from pain, loss of sleep, and violent fever.—The children thus affected, are often weak and emaciated, with a dry shrivelled skin. In the few cases which I have seen, the mode of treatment above recommended in the erysipelas of new-born infants, was adopted, but with little success."

Some attempt is made at reconciling the various descriptions of authors, or showing their mistakes in a name that has hitherto been applied to so many vesicular eruptions, the milder kind of which Dr. W. conceives, we think with much justice, were no more than what is often called swine-pox. On the more accurate forms, he offers the following judicious queries:

"1. Whether the case quoted from Seliger is not a case of the erysipelas phlegmonodes, with some incidental variations?"

"2. Whether

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" 2. Whether in the cases quoted from Sauvages and Thierry, and from the Transactions of the R. Irish Academy, the eruption was not symptomatic, and connected with the typhus or pestilential fever, in the manner stated?"

" 3. Whether the disease described by Dr. Langhans was not rather endemic than epidemic or contagious, and referable to some local cause?"

" Pomphylox, (the next division) we are told, is an eruption of bullæ, without any inflammation round them, and without fever. This complaint is termed by Sauvages pemphigus sine pyrexiâ and by Plenk, pemphigus apyretos; but as it differs in the most material points from erysipelas, and from the pemphigus described by nosologists, I have applied to it a new generic title.—The terms pomphos and pompholyx, originally signified an air-bubble, but were afterwards employed in medical language, to express reddish and rounded elevations of the cuticle, containing a watery fluid. Pemphix, from whence is derived the word pemphigus, denoted a small vesicle or phlyctæna."

The author considers three varieties under the terms, p. benignus, p. diutinus, p. solitarius. The first is so trifling, and is ascribed to so many uncertain causes, as scarcely to deserve notice, excepting for the sake of order.

P. diutinus is for the most part connected with other diseases, principally those from fatigue, intemperance, or meagre diet; but in all cases the business of the practitioner seems to be directed principally to the causes and concomitant symptoms.

P. solitarius is attended with sickness, but no fever. The cases described were all in females, one in the left arm, and two in the breast. The excoriations were painful, and attended with hardness, they were readily relieved by Peruvian bark and linseed poultices.

With this ends the first volume of this valuable work. If we have been less unqualified in our praises of the present number, we are willing to impute it more to the intricacy of the subject, than any deficiency in the author; but we are obliged to confess, that useful as the present number certainly is, we have been less satisfied with it than with any of the former.

The number contains title pages and table of contents.

Erratum. P. 279, line 10, from the bottom, for *articular* read *cuticular*.

Report of the Diseases of Edinburgh, for August 1806; by Mr. JOHN ROBERTON, *Surgeon.*

IN this part of the world we are usually visited in the beginning of August by heavy falls of rain, known to the inhabitants under the name of the Lammas Flood. These, in general, continue only a few days; but when, as in the present season, they continue longer, which they did for the first fortnight of the month, they are generally productive

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ductive of much injury to the crops. Besides, the exhalations from the ground during the foggy days; and the damp, chill, and disagreeable state of the air after sunset, at this time, render the existence of the infirm extremely irksome. Those too, who are subject to the periodical recurrence of slight chronic complaints, have, during such unfavourable states of the weather, each attack considerably aggravated. The weather, however, about the middle of the month, became pleasant, and, for the most part, continued so till the end of it. Although the grain also had seemingly suffered much from rain, the winds, that almost immediately followed, did them great service; and the harvest, by the end of the month, was in considerable forwardness. The thermometer has, especially in the day, indicated from 60 to 70, and sometimes even 80 degrees of heat; and the barometer, even during the heavy rains, never fell so low as often observed when the air is apparently more humid. Some gales of wind, toward the end of the month, seemed to have greater effect in lowering the barometer than even the rains.

Diarrhœa still continues with considerable violence; indeed, with the addition of cholera, it constitutes the principal disease for August. Last month, diarrhœa continued to increase in severity; and about the end of it, or early in the present month, this disease, in some instances, gradually and almost imperceptibly assumed the symptoms of cholera. Thus, probably, from a peculiarity of constitution of the individuals, some were seized with the one, and some with the other of these complaints; while others were first seized with diarrhœa, and afterward with cholera. Although these complaints have been obstinate, I have not met with any that have proved fatal. One or other of them, however, having in some of my patients supervened during a hectic state of the system, have undoubtedly terminated the existence of some of the consumptive, which otherwise might have been prolonged for a few weeks or months.

Diarrhœa, in the present state of it, seems for the most part to owe its origin to substances lodged in the stomach and intestines, and thus probably predisposing to cholera, particularly if free evacuation be not attended to early in the disease. When cholera has formed, opiates and emollient glysters seem best suited to its removal. In some cases of diarrhœa, I have found the administration of different kinds of purgative medicines quite ineffectual, particularly when the disease, as is often the case at present, happens

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happens to be combined with ascarides. I have, in such instances, given submuriate of mercury and assafœtida, in the form of pills, with the very best effect. Sometime ago a case of this kind, and rather of a curious nature, came under my care. The patient was a man about thirty years of age, by trade a smith, who had for two years previously been frequently afflicted with violent diarrhœa, for the removal of which he, by the advice of a physician in Edinburgh, used at one time astringent mixtures, at another smart cathartics, composed of submuriat. hydrarg. and jallap; but neither of these produced any permanently beneficial effects. Receiving, however, momentary relief from them, he occasionally persevered in their use: he, nevertheless, became pale, emaciated, and unable to work at his trade; and in this state I first saw him. He complained of pain about the region of the stomach and bowels, and itching about the anus, with diarrhœa and constipation alternating. Upon taking a dose of the above purgative medicine, he, as formerly, evacuated small parcels of ascarides; and afterwards, for a day or two, even without medicine, he voided several of them; but still derived no lasting relief. I then prescribed for him, pills composed of three grains of assafœtida and two of submuriat. hydrargyrus, desiring him to take two of them thrice a day. It was not till after the third day that he had any considerable evacuation in consequence of them, when, to prevent the probable effects of such large quantities of calomel on the general system, I desired him to desist, and ordered for him half a drachm of pulv. jallap. During the following day, the immense quantities of dead ascarides, which he at several times evacuated, were incredible. Indeed, I could not, previously, have conceived it possible for such numbers to remain in the intestinal canal, without its sustaining almost irreparable injury.

Notwithstanding the debility of this patient, I followed up the first doses of the calomel and assafœtida with still larger doses of the same medicine, and principally supported him by nourishing soups, and such cordials as his stomach seemed capable of receiving, without rendering him sick. Still fresh loads of ascarides were discharged; and in this way he continued the medicine nearly six weeks, when no more of the ascarides were evacuated, and I ceased to administer any medicine. I lastly ordered for this patient, wine, porter, soups, &c. in such quantities as not to oppress his digestive organs; and he is now a stout

man,

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man, completely free from every complaint, and works at his trade with the utmost ease.

From the result of the above case, I have uniformly, on the present occasion, administered the same medicine with invariable success, and even to young children.

Intermittent fever, although, according to my former statements, of late a very uncommon disease in this place, has recently come under my observation in several instances. I have met with it both among adults and children, and have uniformly removed it, except in one instance, by administering the Peruvian bark. I was induced by the obstinacy of one of the cases alluded to, to remove the patient a few miles into the country, when, even without the bark, he recovered completely in a fortnight. The ground where he was first affected was not marshy, but there was a collection of ordure at a short distance from his house, the effluvia of which, in all probability, occasioned his disease.

I think it my duty to mention in this place, that, though not epidemic diseases, I have lately met with an immense number of cases of very great debility of the generative organs, with, and sometimes without, seminal emissions.—Till lately, I never imagined that this constituted a disease of such a formidable nature, as those cases which have come under my observation have proved to me. The penis shrunk, one or both testicles diminished in size, the spermatic chord and epididymus enlarged, partial blindness, cold extremities, with continual horror of mind, convey but a faint idea of the state into which I have seen many patients reduced. In such a dreadful state, I have, however, by the properly regulated use of cantharides, completely restored such patients to health. As I consider these cases of the greatest importance, I shall, in the intervals of professional engagements, draw up a plain statement of them, and through the medium of the Journal, or otherwise, submit them to the public.

No. 4, St. James's Street.

An Account of Diseases in an Eastern District of London, from August 20, to September 20, 1808.

ACUTE DISEASES.			CHRONIC DISEASES.	
Typhus	2	Rheumatismus Acutus	Catarrhus	4
Hæmoptysis	3		Tussis	8
Cholera	12			

Tussis

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Tussis cum Dyspnœa	6	Rheumatismus Chronicus	7
Phthisis Pulmonalis	3	PUERPERAL DISEASES.	
Hydrothorax - -	2	Menorrhagia Lochialis	3
Pleurodyne - -	4	Dolores post Partum	5
Ascites - - -	3	Mastodynia - -	4
Anasarca - -	5	Diarrhœa - -	9
Gastrodynia - -	4	Enterodynia - -	7
Hemiplegia - -	2	INFANTILE DISEASES.	
Dyspepsia - -	4	Aphthæ - - -	3
Hypochondriasis -	2	Erysipelas Infantile	1
Menorrhagia - -	4	Ophthalmia - -	3
Fluor Albus - -	5	Hydrocephalus -	2
Amenorrhœa - -	3	Dentitio - - -	3

In a former Report, a few instances of Cholera were taken notice of, which, it was remarked, had occurred at a period much earlier than that in which this disease usually makes its appearance. The very uncommon heat of the weather was sufficient to account for this, and accordingly, upon a change in the temperature of the atmosphere, this complaint gradually subsided.

It has been observed, indeed, that in hot climates, if, after an excess of heat and dryness, a considerable quantity of rain falls, by which the atmosphere is suddenly cooled, this disease prevails to a considerable degree. The sudden check to perspiration which may be given at such a time, may have some influence in producing or promoting the complaint. The number of patients labouring under this disease has lately increased.

Amongst the cases referred to in the list there were some that were attended with large discharges of a bilious kind from the stomach and bowels. In many instances of intestinal evacuation, the account given by the patient, is not to be received without particular attention and inquiry, as they are apt to be alarmed by the frequent calls to go to stool; and to suppose that the discharges are abundantly more copious than they really are: but in the cholera, the report is generally well founded, though to persons unacquainted with the disease, it would hardly appear credible that so large a quantity could be discharged.

This disease seems to be produced either by a change in the quantity, or quality, of the bile which is secreted, and afterwards poured into the alimentary canal. If, by the state of the atmosphere, or any other occasional cause, this irregular secretion takes place, very copious discharges of bile are immediately produced both from the stomach and intestines,

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intestines. These are often accompanied by a spasmodic affection of the bowels, which also extends itself to the lower extremities.

By these copious evacuations and the pain produced by the spasm, the patients strength is sometimes suddenly reduced, and he soon falls a victim to the disease: but in other instances, the complaint after a few days gradually subsides. Weak diluting liquors taken frequently, and in as large a quantity, as the stomach will bear, without exciting vomiting, answer the purpose of correcting the bile, and carrying it gently out of the system, whilst opiates, by moderating the action of the liver, and diminishing its secretions, and at the same time counteracting the disposition to spasm, serve to bring the disease to a favourable crisis.

INTELLIGENCE.

Professor Davy has read a paper before the Royal Society, containing an account of his various new and important electrical experiments on the decomposition of the earths (already detailed in this Journal,) by which this distinguished philosopher has shewn that they are all metallic oxides, and has thus verified by experiment what had been long suspected from analogy. These important discoveries complete the history of alkaline and earthy bodies, and form an era in chemical philosophy. They likewise must lead to great improvements in mineralogy and geology, the last of which sciences has hitherto wanted elements. In the same communication in which these facts are announced, a most important experiment of two Swedish chemists, Messrs. Benzelius and Pontin, is mentioned. These gentlemen have combined the basis of volatile alkali with quicksilver, and in this way have formed an amalgam. Here is something metallic apparently composed of two gases, a circumstance in which the dreams of the alchemists seem to be realized.

The Rev. Mr. Leg, of Ashprington, Devon, has invented a contrivance for discharging the superfluous water from ponds, tanks, and reservoirs, in times of floods. It consists of a beam of wood, suspended by an iron pin, over the head of the water, so as to form a kind of lever or balance, having one end affixed to a chain, which raises a plug, to let out the superfluous water, and having suspended at the other a box or bucket, made rather leaky, into which the water is conveyed by a pipe, whenever it rises to a certain

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tain level. As long as the bucket continues filled with water, the weight will raise the plug, and when the water no longer keeps the bucket full, the plug will return to its place, by the lever recovering its level position.

Dr. PARRY, of Bath, has recently investigated the causes of the decay of wood, and the means of preventing it. For this purpose, he recommends the application of a preparation of the rezinous kind mixed with a certain portion of bees-wax. The proportion of the ingredients, and the mode of mixing them, are as follow.—Take twelve ounces of rosin, and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train-oil; heat them slowly, gradually adding four ounces of bees-wax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use. It is recommended to dress every part of the wood work with this composition, twice over before the parts are put together, and once afterwards; and a higher state of preservation is promised from its use than has yet been attained. It should be observed, that in preserving this varnish, it is adviseable, in order to prevent accidents, to use an earthen vessel, and to make the fire in the open air.

The following simple method of preventing the destruction of flax by the caterpillar, has been practised with success in Holland. It consists in making persons walk twice a day along the furrows, with a rope fastened to two poles, so as to cause the rope to drag over the plants, by which the insects are swept off them. This operation repeated for four succeeding days preserves the flax; though, in some instances, in three days it has been found to produce the desired effect.

An interesting analysis of coffee has recently been made by M. CADET, apothecary in ordinary to the French imperial household, from which it appears that the berries contain mucilage in abundance, much gallic acid, a resin, a concrete essential oil, some albumen, and a volatile aromatic principle. To these may be added such as are found in most vegetables, viz. lime, pot-ash, charcoal, iron, &c. Roasting developes the soluble principles; but it ought to be moderated, if it be wished to preserve the aroma, and not decompose the acid, the gum and the resin. Mocha coffee is of all kinds the most aromatic and resinous. M. Cadet advises that coffee be neither roasted nor infused till the day it is intended to be drunk.

The greater part of the celebrated vineyards of Tokay have this year been entirely destroyed by a tremendous storm, accompanied with hail and the bursting of a cloud. The hailstones were as large as walnuts, and the bursting of the cloud was so violent, that stones of great weight were thrown from the vineyards into the village. By this accident seven men and one boy lost their lives, and a great number of cattle perished. The injury sustained by the vineyards is incalculable. The whole village was so entirely filled

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filled with stones, that the labour of hundreds of people was required to clear them away.

The Legislature of Maryland have passed an act for founding a medical college in the city or precincts of Baltimore, for the instruction of students in the different branches of medicine. This institution is established upon a liberal plan, and incorporated in perpetuity. It consists of a board, called the Regents of the College of Medicine of Maryland, formed from the existing board of medical examiners for the commonwealth, and the president and professors appointed by the act. It may hold property to a value not exceeding thirty thousand dollars, exclusive of a lot of buildings. The regents may appoint professors and lecturers, who shall form one learned body, under the name of the Medical Faculty, with power to chuse their dean, and to do what is necessary for conveying instruction, and supporting discipline. The regents must meet at least once a year. The faculty shall hold at least one term annually, to begin on the first Monday in November, and continue not less than four, nor more than six months. At convenient times commencements may be held, and degrees in surgery and medicine may be granted, after due examination and other proofs of sufficiency. Each student must have attended each course of lectures at least once, and frequented the classes of the college for two terms: and he must also have been privately and publicly examined, and have printed and defended a thesis, before he can be admitted to the honours of the college.

It has been suggested that the sunflower might be successfully cultivated for the purpose of supplying our clothiers with oil. As much of the oil imported from the Levant, under the name of Florence oil, when it becomes rancid, is sold to the clothiers for the purpose of softening their wool, when preparing for the loom, it is conceived that the oil extracted from the seed of the sun-flower might be advantageously employed in the same way.

St. George's Hospital, and George-Street, Hanover Square. — On *Thursday, October* 6, Dr. George Pearson, F. R. S. Senior Physician to St. George's Hospital, of the College of Physicians, &c. will recommence a Course of Lectures on Physic and Chemistry, at the Laboratory, George-street, Hanover-square, at the usual morning-hours; viz. the Therapeutics, at a quarter before eight: the Practice of Physic at half after eight; and the Chemistry at a quarter after nine. Clinical Lectures are given, as usual, on the patients of St. George's Hospital, every Saturday morning, at nine o'clock. — Proposals to be had in George-street, or at St. George's Hospital.

Mr. Chevalier will commence his next Course of Lectures on the Principles and Operations of Surgery, on Wednesday, the 5th of October, at eight o'clock in the evening, at his house in South Audley-street, Grosvenor-square.

Dr.

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Dr. CLUTTERBUCK will begin his Lectures on the Theory and Practice of Physic and the Materia Medica, on Tuesday, Oct. 4, at ten o'clock in the forenoon, at the General Dispensary, Aldersgate-street.

Mr. CARLISLE, F. R. S. and Surgeon to the Westminster Hospital, will resume his Course of Lectures on the Art and Practice of Surgery, in the beginning of October, at his house in Soho-square; other particulars may be known by enquiring at Mr. C's house.

A MOST useful and elegant Anatomical Work, in folio, will be published in a few days, entitled Anatomico-Chirurgical Views of the Nose, Mouth, Larynx, and Fauces, with appropriate Explanations and References to the Parts. By Mr. J. J. Watt, Surgeon; designed by the Author, to illustrate the Anatomy of these Organs, as they appear in different sections of the head, and performed with the strictest attention to anatomical accuracy. The engravings will be four in number, containing six views of the parts of their natural size, and accompanied with the same number of outline figures of reference; with an additional anatomical description of these organs. By Mr. W. LAWRENCE, Demonstrator of Anatomy, at St. Bartholomew's Hospital.

Dr. ANDREW GRANT, who has recently returned from South America, has in the press a History of Brasil, which will contain a geographical and historical account of that important colony, with a description of the manners, customs, religion, &c. of the natives; interspersed with remarks on the nature of its soil, climate, productions, and foreign and internal commerce; to which will be subjoined, observations on the most prevalent diseases incident to the climate, with hints to new settlers on the most efficacious modes of prevention. It will form one volume, octavo.

Dr. SMITH will shortly publish a work in one volume octavo, under the title of Botanical Illustrations, intended as a continuation of his Introduction to Botany.

NEW MEDICAL PUBLICATIONS.

A Treatise on the Operation of Lithotomy; by Robert Allan, Surgeon, folio. 1l. 11s. 6d.

Modern Medicine, containing a brief Exposition of the principal Discoveries and Doctrines that have occasioned the recent advancement of Medical Philosophy, with Strictures on the present State of Medical Practice; by David Uwins, M. D. 8vo, 6s.

To CORRESPONDENTS.

We are much obliged by a Communication from Dr. BLEGBOROUGH, and shall pay due attention to it, if necessary.

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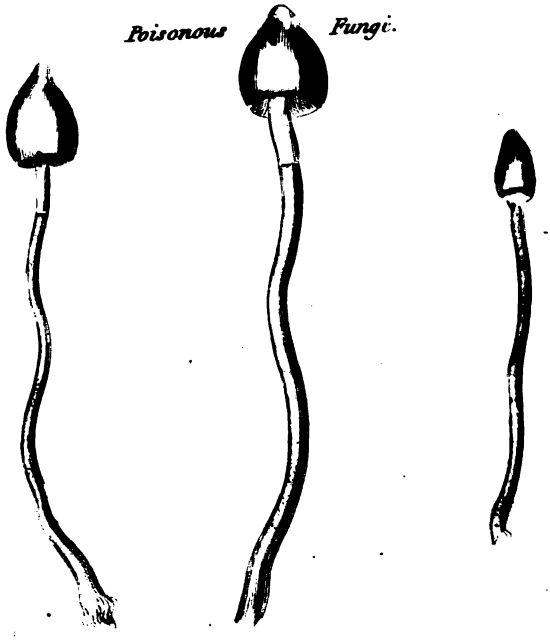
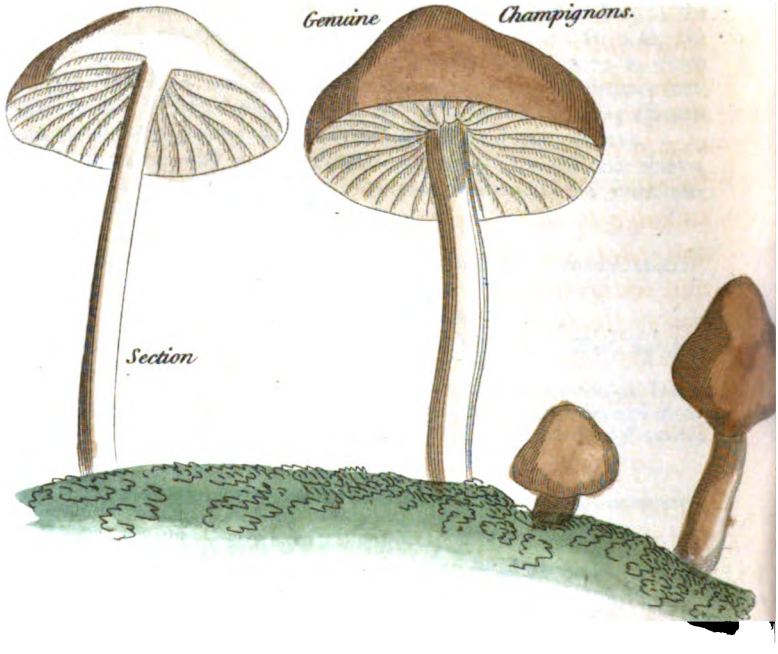
Poisonous Fungi.



Genuine Champignons.



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THE

Medical and Physical Journal.

VOL. XX.] NOVEMBER 1808. [NO. 117.

Printed for R. PHILLIPS, by W. Thorne, Red Lion Court, Fleet Street, London

Our readers will observe by the title page, that the name of Dr. Adams is substituted for that of Dr. Batty. The department of the profession in which Dr. Batty is chiefly engaged, frequently rendering it impossible for him to lend his assistance when it was most wanted, he has found it necessary to decline the engagement altogether.

The present Editors, in requesting the continuance of the favours of their Correspondents, are aware that some objections have been made to the admission of certain controversial papers, and to others which have appeared to be of minor importance. The first class it has been the business of the Editors for some time to discourage. Respecting the second, it should be recollected, that many papers, apparently unimportant, have given rise to discussions highly valuable in their result. All importance is relative, and that which is familiar to some readers, is new and interesting to others. However, as this objection is likely to exist among our best informed readers, we hope they will afford the true remedy, by furnishing us with valuable communications of their own.

The critical department, which has always been distinct from the editorial, will remain in the same hands as heretofore. In this part of the Journal, it has been the wish of the Editors that unnecessary se-

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verity should be avoided; that the spirit of the works reviewed should be transfused into their pages; and that all imperfections should be pointed out, in a manner which may convince the author that they really exist. If, however, any author conceives himself mis-understood, or treated with undue severity, the Journal affords a fair opportunity to reply.

In acknowledging the liberality with which this undertaking has been supported, during a period of eleven years, the present Editors promise an increase of diligence proportionate to the great encouragement with which the work has been honoured.

It may be presumed, that many professional gentlemen, who have become stationary during the progress of this Journal, will wish to include in their Libraries a work which forms a complete Medical History of the last ten years. To accommodate such, and to remove every impediment to the increasing circulation of the work, the Proprietor has consented for the next two months, or during the current year, to deliver complete sets of NINETEEN VOLUMES *at the reduced price of* TEN POUNDS IN BOARDS, *instead of the usual price of* THIRTEEN GUINEAS; *but, to make up for such a diminution of his own profits, it will be necessary for those who wish to become purchasers on these terms, to address themselves directly to him, and their orders will meet with prompt attention.*

To

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To Dr. ADAMS.

DEAR SIR,

IN compliance with your request to be informed of the disease which occasioned the death of that extraordinary literary genius, the late Professor Porson, and of the appearances on dissection, I herewith inclose the best account that I am able to give. I lament that the history of his illness is necessarily very imperfect, because he had not been visited professionally by any medical person, until a short period before his death.

On Friday, September 16, I called to speak to him about a book, and was shocked at his generally diseased appearance. I asked if he was not sensible of much indisposition; to which he replied, that he had been ill for some time of *ague and fever*, but that he now thought himself better.

His countenance was pale; his skin was hot; his pulse quick and feeble; and his tongue white. I told him that I supposed his reason for using the term ague, was his having had cold fits succeeded by heat, to which he assented; that these symptoms were common to almost all fevers, however excited; that he was at that moment very seriously ill from a cause intirely different from what he imagined; and I concluded by begging him to send for my friend Mr. Upton, who was just at hand, or for some physician of his own acquaintance. To this, however, he would not consent, as he said he was now better; but I so far prevailed as to obtain his promise to do what I desired the next morning, if he should not continue to improve. To a message which I, the next day, sent, he returned for answer that he was better.

I heard nothing more of him until the evening of Tuesday the 20th, when Mr. Savage, the under librarian, came for me, and said that Mr. Porson had had a fit, as he believed, of epilepsy, and that he was much alarmed about him. I found Mr. Porson sitting up, and staring about as if surprised. The only answer that I could obtain to any question was, Well! How? What? and he appeared to be utterly incapable of reasoning or of comprehending what was said to him.

In this state he was put to bed, and I sent immediate notice of his situation to his brother-in-law, Mr. Perry, who very soon arrived, and who continued to the last to pay him the kindest attention, with the most affectionate solicitude. A clyster

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A clyster was injected, and he was with difficulty made to swallow a pill containing two grains of calomel; and some hours afterwards, a draft of infusion of senna and Epsom salt. These procured two or three copious motions, after which he brightened up, and for a short time seemed much relieved.

Dr. Babington and Mr. Upton now saw him, when stupor had again returned, accompanied by such a state of general debility as to preclude all idea of farther evacuation. Blisters and sinapisms were applied, which produced transient relief; and it was endeavoured to support his strength by wine and cordial medicines, of which, however, very little was swallowed. He continued, with a few slight and short appearances of amendment, to grow weaker until Sunday night, when he died; having gradually lost the power of speech and sight, so that two days before his death, his eyes were perfectly insensibe to the light of a candle.

The following account was given to Mr. Perry, signed by Dr. Babington, Sir W. Blizard, Mr. Thomas Blizard, Mr. Upton, and myself.

"On examining the body of Professor Porson, we observed the following appearances.

"The body was emaciated.

"The dura mater did not exhibit any unusual appearance.

"Under the tunica arachnoides a clear fluid was seen to be generally diffused over the surface of the brain; and upon separating the pia mater, lymph, to the quantity of about an ounce, issued from between the convolutions of the brain.

"The brain was of an unusually firm texture, its cortical part was of a lighter colour, and its medullary part was less white than is common.

"The ventricles did not seem to contain more than one ounce of lymph; but upon removing the whole of the brain, at least an ounce and half more lymph remained at the basis of the skull.

"The abdominal viscera did not present any thing particularly worthy of notice. The substance of the intestines, indeed, was unusually thick, as was that of the bladder; there was an adhesion of the omentum to the liver, and several more between it and the diaphragm; and in its peritoneal covering there was a small ossification. The pylorus was very narrow, but without disease. To none of these circumstances do we attach any consequence, as they do not appear to have had any share in producing death.

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"The heart was sound, and the pericardium contained the usual quantity of lymph.

"The left lung had many adhesions to the pleura, and bore visible marks of former inflammation. The right lung was in a perfectly sound state.

"From a due consideration of these circumstances, and of the symptoms observed during the short period of his confinement, as well as of what we knew to have been his usual sedentery mode of living, we are of opinion that the effused lymph in and upon the brain, which we believe to have been the effect of recent inflammation, was the immediate cause of his death. It may also be observed that his health had been in a declining state during some months, so as to have been visible to his friends."

It is very clear that, during the indisposition, which he called ague and fever, a slow inflammatory action was going on within the head, the result of which was the effusion above noticed. The first effect of compression from this cause that was noticed, was on Monday the 19th, on which day he walked from the Old Jewry to the west end of the town, when he fell in the street, and was taken in a state of insensibility into a neighbouring house, where he remained all night. After this he did not *perfectly* recover his intellects.

WILLIAM NORRIS.

Old Jewry, October 7, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AMPLE experience has convinced me of the vast importance of correctly directing the practice of blood-letting, in the relief and cure of various states and conditions of disease. The general advantages of this remedy, when indicated by indubitable signs of systematic strength, vascular fullness, and immoderate excitement, are too evident to be at all questionable; it is when the seeming occasion for its employ is rendered doubtful by the presence of symptoms that would appear to contra-indicate its adoption, that it is of moment to resort to it in such a manner as may prove salutary, without incurring any risk of doing injury.

In this neighbourhood, a pulmonic affection has lately prevailed, bearing a strong resemblance to that character

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of disease which has been denominated Peripneumonia Notha. In this complaint, respiration is often much embarrassed, accompanied with a short dry cough, and more or less of pain in the region of the thorax, sensibly augmented by deep inspiration; the pulse is usually full and quick, but, in most instances, has but little or nothing of that tensive hardness, which denotes the existence of inflammatory affection; the tongue is dry and coated; thirst urgent; the skin hot and unperspiring; and febrile chilliness and heat alternately occur at irregular intervals. The disease which is announced by this groupe of symptoms, is that which has deservedly induced great caution with regard to bleeding. Instances certainly abound of irreparable mischief having resulted from an unguarded loss of blood in the recited affection. The evacuation has been often followed by a rapid declension of strength, and a speedy termination of life. On the contrary, it must be confessed, the disease has been known to advance in its destructive career, when bleeding has not been resorted to, but when a tonic and sustaining mode of treatment has been adopted.

The experienced medical practitioner, must have seen enough of this disease, to be persuaded that bleeding in its treatment, is rather a remedy to be occassionally employed with discriminating caution, than to be wholly withheld. The thoracic difficulties presenting in this disease are often much relieved by the loss of not more than three ounces of blood: that small quantity removes the morbid fullness of the vessels, usually existing on these occasions, without inducing additional weakness; it also tends to facilitate the transmission of the circulating fluids, to promote a determination to the surface, and thus to render essential benefit. Three ounces of blood, drawn at any stage of this disease when respiration is much oppressed, will be found sensibly to alleviate the pressure of that symptom, when the most extensive blistering of the chest will not avail; and it will often occur, that external irritation, either by vesication, pustulation, or rubefacience, will be additionally efficacious in relieving strictured and painful breathing, when preceded by a moderate loss of blood.

The great practical end obtained in proposing the removal of so small a quantity of blood, as cannot sensibly diminish strength, whilst it directly and permanently lessens the patient's suffering, is, to avoid the danger of what has been held as a doubtful remedy, by employing it in such a manner as may prove salutary, without the possibility even of its being injurious.

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The indication for small bleedings is not confined to peripneumonia notha, it occasionally extends to every variety of complaint connected with an undue degree of vascular distention. It is indeed highly gratifying to observe, how much the stimulant influence of vascular plenitude is relieved by a small evacuation of blood. Striking examples of this are afforded in the menstrual and hæmorrhoidal discharges, and also in periodical bleedings from the nose; on these several occasions, painful distention is felt either in some particular viscus, or throughout the system at large; the quantity of blood that escapes in these cases, rarely exceeds three or four ounces, and yet this is found sufficient to restore the morbidly distended vessels to the healthful state.

The stimulus of distention is the most universal, and the most efficient that the animal economy is subject to; the functions of both life and health are connected with the laws of its action; it is, therefore, of the utmost consequence, that a due regard should be had to its influence in considering the nature and cure of diseases. The various operation of emetic, cathartic, sudorific, and diuretic medicine, respectively goes to abstract from the vascular system a portion of its contents, by which hurtful distention is relieved, and any immoderate action depending on that state is likely to be subdued. Hence it appears, that the occasion for diminishing the circulating fluids is co-extended with that of excessive action and fullness of vessel, yet it is more especially necessary in relieving the pressure of symptoms arising from an interruption given to the passage of the venous blood from the *vena cava* through the lungs to the heart. Whenever this occurs, whether in peripneumouia notha, in apoplexy, in epilepsy, in the hot stage of fever, or in suspended animation from drowning and other causes, a loss of blood proportioned in quantity to the circumstances of the case is indispensably requisite.

Morbid action arising in any part of the body may awaken a degree of general excitement, that may painfully distend the vascular system, and induce a necessity for diminishing the circulating fluids, either by blood-letting, or by some increased secretion. In phthisis pulmonalis, small bleedings, as indicated by occurring pain or oppression on the lungs, are highly beneficial. A patient under my direction, who ultimately died of tuberculated lungs, as ascertained by dissection, survived upwards of two years what was considered as the last stage of pulmonary con-

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sumption, manifestly by the aid of small and repeated bleeding: not more than from two to three ounces were ever taken at once; and the urgency of thoracic oppression, approaching even to actual suffocation, absolutely required that it should be resorted to, as the *unicum remedium*, every three or four days. A well regulated course of bleeding, in the early stage of phthisis pulmonalis, appears to me, to afford more unequivocal benefit than any other mode of assistance. By relieving vascular distention, it improves the pulse, and contributes to protect and eke out the systematic strength, rather than to impair and hasten its demolition.

Advantageous as small and well-timed bleeding actually is, and may be, in various states of disease, yet the observant practitioner must have borne painful testimony to the irreparable mischief it is capable of producing, when indiscriminately and unjustifiably employed. An unhappy prejudice seems to have long had a baneful currency in medical practice, respecting a warranty for repeated blood-letting derived from the *aspect* of the blood drawn. It is confidently held, that what is commonly termed the buffy or yellowish appearance at its surface, indicates the existence of inflammatory action; and it is farther insisted, that the quantity of blood necessary to be evacuated in that state, may be safely and salutarily measured by the continuance of that appearance.

This opinion appears to have gained general assent, and is dogmatically upheld with all the authority due to an indisputable axiom. When it is considered, that the appearance on which so much practical reliance is placed is fallacious, in as far as it is more the result of accident in the process of coagulation, than a sure criterion by which to judge of any condition of either vascular action, or vascular fluid requiring the removal of blood, it must be obvious that irretrievable injury must have been often occasioned by this prevailing misapprehension. It is well known, that if blood be drawn from a large orifice, and received in a deep and narrow vessel, such as a tea cup, it will almost, under any circumstances of either health or disease, exhibit on its coagulated surface the buffy aspect under consideration. This effect necessarily results from the contracted surface exposed to the atmosphere causing coagulation to obtain slowly, and thus affording the globular or red part of the blood time to subside, leaving the coagulable lymph, with which it was previously mixed, on the surface. If the same blood were received into a tea *saucer*, instead of a tea *cup*, the ensuing coagulation would speedily

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ly take place, and obviate the separation and consequent subsidence of the red particles from the coagulable lymph; hence, the aspect would be florid, and the accredited yellow sign of inflamed blood would be wanting; a circumstance therefore so accidental as the aspect of drawn blood generally is, deserves not to be considered as a valid authority for blood-letting, in diseases in which that remedy, without such an appearance, would be deemed questionable.

To persist in drawing blood as long as its surface shall exhibit a buffy aspect, has been the *sanguinary* (to use no stronger epithet) direction of those who have implicitly depended on the supposed sure guide, afforded by this casual and unimportant appearance. It has occurred to me, to observe much of the destructive influence of this inconsiderate practice, and to have, in many instances, exposed the deception that had warranted it, by requiring that the suspicious blood should be received in a superficial, instead of a deep vessel.

The stimulant effect of extreme debility, as well as that of excessive tone, very generally induces more or less of painful sensation, which would be very inaptly and injudiciously treated by blood-letting; yet the aspect of blood drawn in such a state, might, if received in a deep bason, in the accustomed manner, be of the buffy description, which, agreeably to popular opinion, would at once serve to determine the inflammatory nature of the disease, and demand repeated evacuations of blood. Against this heedless and pernicious practice, it behoves every person, conversant with its hurtful effects, to enter a decided protest, and to declare it to be neither authorised by any rational principle of physiology, nor by correct experience.

The texture of drawn blood is a less fallible test of the state of vital action, than that which is afforded by its superficial colour; when dense and cohesive, the existence of an adequate degree of vascular tone and energy is evinced; on the contrary, when loose and easily separable, it may be justly considered as the effect of deficient strength.

These different conditions, respectively, furnish appropriate indications of cure; in the one case, a reduction of vital power; in the other, its augmentation and support; on the former occasion, blood-letting is a direct and powerful remedy; on the latter, it would be necessarily injurious, and may prove destructive.

I am, &c.

ROBERT KINGLAKE.

Taunton, Sept. 17, 1808.

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS there are still, I believe, many who disbelieve in the existence of Hydrophobia, I think it right that as much publicity as possible should be given to every case that may occur. By such multiplied evidence, these sceptics must be at length convinced, and may be saved from falling into a fatal security; and by a faithful report of every instance, the attention of able men may be drawn to the subject, and some new light probably thrown on a disease which has hitherto baffled the power of medicine.

ELIZABETH SHARPE, aged 59, a small and delicate woman, was bitten in the hand on Sunday, July 24th, by a lap dog, which had followed her sister home that morning; and was detained with the hope of ascertaining its owner. In the course of the day, three children who were playing with it, were also bitten; and on the following morning the dog was driven from the house, and seen by them no more.

By some strange infatuation, no attention was paid to these circumstances, but the wounds (all of which were trifling) were left unheeded. In this person, the injury was inflicted over the first joint of the thumb of the right hand. The wound continued sore and troublesome for a few days, when a dry scab was formed over it, and the occurrence no longer noticed. The woman continued perfectly well until Sunday the 14th of August, three weeks from the time of the accident; when in chopping some wood, she run a small splinter into her thumb near the bitten part, from which there was a small oozing. She soon afterwards complained of much pain in that thumb and wrist, which increased in violence, and gradually extended up the outer side of the arm to the shoulder.

On Tuesday morning, August 16, she came to me, complaining of great pain in the right arm and shoulder, which, as she had been subject to the rheumatism, and none of the above-mentioned facts were disclosed, was treated as such. In the evening the pain had increased, and she declared herself unable to swallow liquids. I was called to her about 8 o'clock, and found her sitting up in bed, with a marked expression of anxiety in her countenance, though perfectly unsuspicious of the nature of her disease. She complained of great pain and oppression at the præcordia, with a sense of constriction in the throat. Her pulse was 120, small and hurried, and she was distressed by great thirst, with frequent

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frequent retchings. Her respiration was difficult and oppressed, and the pain from the arm had extended into her right breast. Having observed some rag rolled over her hand, I enquired into its use, and then discovered what has been above related; and on offering her some fluid in a tea-cup, had but too much reason to be convinced of the nature of her wretched disorder. Every attempt produced the most violent spasms in her throat, even before the vessel had reached her mouth.

It appeared, that during the greater part of the day she had found some difficulty in taking liquids; but which had very much increased towards evening.

℞. Opii purif. Ammon. pptt. a. gr. ij. Camphor. gr. iij. M. f. Pilul. 4tis horis sum. Applic. empl. canth. scrob. cordis. Applic. empl. ampl. ex confect. Opiat et camph. pectori. Infricet. brachiis ambob. ung. hydr. f. camphor. ʒij. et 6tis horis repet.

Fomentations were ordered also to be applied to her feet; and her arms to be washed with vinegar, previous to the application of the ointment. When the cold vinegar touched her skin, a sensation of great horror and uneasiness was produced, but which was not of long duration. In taking her second pill, she asked for some honey, and when she had helped herself, thrust away the basou as if distressing to her sight.

August 17th. I visited her this morning at 7 A. M. and found my patient had passed a sleepless and most restless night, though the pain and oppression at her stomach were in some degree relieved. She had swallowed, in the course of the night, three tea-spoonsfull of brandy and water, but not without the greatest difficulty, and violent spasms being each time produced. The ointment has been twice used, and the pills regularly taken.

℞. Persist. in usu pilul, cum addit. Calomel. gr. j. dosi singul. 4tis horis sumend. Persist. in usu unguent.

At 1 o'clock P. M. the difficulty of breathing was much increased, and she complained of a sense of suffocation from the wind rushing forcibly from the stomach into her throat whenever she attempted to swallow. No inflammation could be perceived in the course of the lymphatics, nor tenderness in the axillary glands. She had taken a few pieces of veal-cutlet into her mouth, chewed, but could not swallow them. She now ate with great resolution, one small portion of sopped bread, but it was evidently a considerable exertion; and after several efforts, succeeded in carrying a tea-spoonfull of liquid twice or three times to her mouth,

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mouth, swallowing a small quantity at each attempt; but when a cup was offered her, before it could approach her mouth, she was always violently convulsed.

℞. Opii purif. gr. j. Calomel. gr. ß. Camphor. gr. iij. M. f. pilul. quaq. hora sumend. Infric. femorib. et brachiis ung. hydrarg. fort. ʒij. 4tis horis.

10 o'clock, P. M. The patient considerably worse. The difficulty of swallowing and dyspnœa much increased; often gasping for breath from a sensation of suffocation, and her countenance expressing the utmost horror and anxiety. Her pulse 140, and very feeble. She had perspired freely, and in the forepart of the evening appeared in some degree composed; but having unfortunately overheard some conversation about the dog, incautiously held in the room, she became sensible, for the first time, of her truly wretched situation, and was deeply affected at the disovery. Since that time she has been much harrassed by convulsive fits, which occur very frequently, but at uncertain periods; and during which, supported by some attendants, she rushes forward a few paces, as if to relieve herself from some confinement; she is always aware of their approach, and prepares herself to meet them, by taking fast hold of two persons, assuring them at the same time, that they shall receive no injury. She is now extremely sensible of the least noise, and frequently speaks a few words to some ideal object; and then, recovering herself, inquires what she had seen.

Her eyes are turgid and appear thrust forward, and her other features are much distorted. She now finds great difficulty in swallowing the pills, and has succeeded in getting down only three. She attempted to suck a slice of cucumber, but every trial brought on the convulsive fits.

Sumat. tinct. opii, ʒß. 2da. quaq. hora. Injiciet. enema cum tinct. opii, ʒiß. Applic. empl. canth. ampl. inter scapul. Persist. in usu unguent.

August 18, A. M. Found my patient had expired about half an hour, after a violent convulsive struggle, which lasted about five minutes, but ceased a few seconds before she breathed her last. She had suffered much through the night, from the repeated convulsions; during the intervals she rambled occasionally, but was perfectly sensible when roused, even to the last half hour; and appeared to take great pleasure in rubbing a table in the room, folding and putting away her clothes, &c. when the convulsions would permit.

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Her greatest concern was lest she should injure her sister; and to prevent that, strenuously requested that she might be confined in a room by herself. In the course of the night, her mouth became much affected by the mercury, the gums were swollen, and the secretion of saliva considerably increased.

She had also two copious evacuations of urine, which passed involuntarily and unconsciously during the convulsive paroxysms.

She had taken the laudanum only three times; and they had not been able to administer the injection.

Neither the opium, which was taken freely, nor the mercury, which produced its full effect on the system, appeared to have the least influence on this disease.

She had not a moment's sleep, from the first accession of the hydrophobic symptoms, to the time of her dissolution; a period of about forty-five hours.

From the situation of the family, it was not possible to examine the body.

Of the three children who were also bitten, one belonged to a friend, and was soon after removed to London; the others, (one about seven, the other fourteen years old) to the sister of the deceased, who kept the house.

The wounds which were on their hands were trifling, and in a few days perfectly cicatrized; nor was there in either the least appearance of disease. It was deemed expedient however, as the best means of prevention, that the parts should be destroyed, and the patients put under the influence of mercury; the former was effected with the calx cum kali puro; and after the separation of the sloughs, the wounds were dressed with a stimulating ointment, and discharged freely for three or four weeks. For the latter, the mercurial friction was employed, and a moderate affection of the mouth kept up for about a fortnight. The children have hitherto continued perfectly well; but whether their safety may be in any degree attributed to the treatment they have undergone, must remain for future experience to determine.

Having discovered the owner of the dog, a respectable gentleman in the neighbourhood, I applied to him for a particular account of all he had observed in the animal; and the following is a brief abstract of the statement with which he has obligingly furnished me.

In the last two years, the dog has been frequently unwell, and particularly after the three last litters, when all its

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its puppies were dead. In the beginning of July, it was observed to be very sickly; it ate little, and appeared heavy and dull. One of the children making a noise with a kettle on the pavement, the dog snarled and attempted to bite it. This being unusual, and reports of mad dogs prevalent in the neighbourhood, the family were alarmed, and offered the animal some water; she refused it at the moment, but afterwards drank freely, and their apprehensions were removed. About the middle of the month, she appeared to be perfectly recovered, eating heartily, and as playful as usual.

On Friday July 22d, she was observed to be at heat; and being found before the house surrounded by dogs, was driven in by the family. On Sunday morning the 24th, she was seen in the garden, eating currants, &c. from the bushes, and afterwards escaped from the premises. It then appears, that she went home with the sister of the deceased, and was detained by them till the following morning; while there, it refused all food, and was generally lying under the tables, &c.

On Monday the 25th, in the forenoon, the dog was seen passing the residence of its owner, and was called by some of the family; it turned immediately and went into the house. In the hall a child attempted to stroke it, the dog snarled and the child was removed. This circumstance creating an alarm, the animal was confined in an out-house and supplied with food and water. She appeared anxious to be released, and frequently made a sharp, though not loud howl; but whether from impatience of confinement or a sense of pain, as the gentleman supposed, must be doubtful. No saliva appeared at the mouth. On Wednesday morning the 27th, some of the food had disappeared, but not being always watched, it had not been seen to eat. On the evening of that day, however, it *was observed lapping the water.*

On Thursday the 28th, early in the morning, it was found lying in the back part of the building, its head resting between its paws on the ground; when called it raised its head and looked up, but made no further attempt to move; in half an hour it was again visited, and discovered stretched out on its side dead.

I am, &c.

HENRY A. THOMSON.

Kensington, Oct. 15, 1808.

To

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To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the nineteenth volume of the Medical and Physical Journal, page 119, an obstinate case of Framboesia, or Yaws, is mentioned, in which the disease, though of long standing, is said to have been cured by the use of a remedy, which the author considers as new and unknown to medical practitioners. The remedy however therein recommended has been long employed in this complaint in several of the French West India Islands, as I have been informed by a medical gentleman, who resided for many years in that part of the world. What moreover tends to confirm the above account is the testimony of Pere Labat, who, when speaking on this subject, in his Histoire de la Louisiane, mentions the following formula, which the reader will observe, differs not essentially from that to which the cure in the above case is principally attributed.

"Take iron rust reduced to powder, and passed through a fine sieve; moisten it with citron juice, so that it may have the consistence of ointment; spread it on a linen rag, rubbed over with wheel grease, or fresh lard, and apply it night and morning."

Without calling in question the efficacy of the carbonate and oxides of iron in phagedenic and ill-conditioned ulcers,* we may be permitted to observe, that the total want of information respecting the regimen employed in the case of this unfortunate patient, greatly detracts from the value of Dr. Humphrey's communication.

It is well known that nothing proves more conducive to the cure of this loathsome disorder, than a nutritious regimen, attention to cleanliness, pure air, and sea bathing; yet in the case under consideration, excepting a decoction of some roots, exhibited occasionally to the patient by his countrymen, and which the author supposes to have operated as a purgative, we are not informed whether any internal remedies were employed, or any measures pursued to improve the general health, or invigorate the constitution,

* A case lately fell under my own observation, and which will probably appear in a future number of the Medical Journal, of a phagedenic ulcer of the tongue, which readily yielded to the carbonate of iron, after resisting various other remedies.

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tion, though every practitioner, acquainted with the connection between local and general disease, knows that unless attention be given to correct the cachectic state, or bad habit of the patient, labouring under ill-conditioned ulcers, all local means will for the most part prove ineffectual to promote their cicatrization

I am, &c.

R. HALL.

Clifford's Inn, 1st October, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THOUGH I have declined the practice of my profession, I shall ever consider it my duty to promote its interests, and to contribute the mite which Providence may put in my way for the good of society, and the advancement of science. I trust I am solely actuated by this principle, in eliciting, through the medium of your liberal miscellany, the opinions and theories of my medical brethren, on the remarkable facts which I have been engaged to ascertain. There is now living in the village of Tutbury, in Staffordshire, a woman named Ann Moor, in whom nature appears to have established a mere circulating recumbent life, without the usual essential of nutricious juices. It appears from her asseverations, which I am compelled to admit on the subsequent testimony of actual demonstration, that this striking variety of constitution has been the work of many years. The consistency of her whole narration, as to the main fact, is itself a forcible evidence of her integrity. But I have taken pains to give it all the confirmation that a human circumstance could admit, or the most determined incredulity suggest. All the persons formerly about her, have been removed, and she has been taken to the house of a most decided objector to her veracity; and two persons in succession have watched day and night. Placards have been stuck up, maintaining these facts; and the sceptical invited to witness or take part in the investigation.

It has been announced in the Derby paper, and the medical men of that place acquainted with it, both by letter and personal interview. But as to evidence, I need not affirm further, than that it has not left an individual in the place unsatisfied, and remains at this time a notorious fact that

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that continues to invite the inquiry, and challenges disproof before all the world. She had been declining in health a long time, and thinks she had not been an hour free from pain in her left side for nine years previous to her first attack of Anorexy; which she imputes to her washing out the linen of a person affected with scrofulous ulcers; in consequence of which, she lost all desire of food, and yielded her work on the 4th of November, 1806. From that time till March, the amount of sustenance taken did not exceed the ratio of ℥ß per diem, her strongest drink being tea, but without milk or cream; whatever she took, recalled to her imagination the strong smell of corruption, which at first disordered her; and the slimy matter which she frequently vomited up from the mere recurrence of the idea, seemed to have the appearance and scent that had offended.

In March, 1807, she was afflicted with strong fits, which usually left the cramp in her stomach; to remedy which, she drank boiling hot gruel, which, though it scalded her lips, had no disagreeable effect on her stomach; and any thing of inferior heat gave a sense of cold, and caused rigors. She first took to her bed, for a continuance, on the 14th of April, 1807.

On the 20th of May following, she attempted to swallow a bit of biscuit, which was immediately rejected with dreadful vomiting, and blood.

In the latter end of June, she took the last substance she ever swallowed, being a few black currants. Her last evacuation, (e recto) was by diarrhœa, and took place on the 3d of August. Since which time, she has fallen off also in the quantity of fluids, omitting to take any (at times) two days together. Her common tea has been once varied for onion tea. Her strength she allows to have decreased, but her spirits and mental energy never have, though she is frequently taking cold from the slightest causes. Nor is her head ever free from pain.

In the course of the first three days of the investigation, she swallowed in the whole about ℥iß of water: but happening to step into the room while she was swallowing it, the extreme misery of deglutition, and the violent rising of wind resisting its passage to a degree that almost seemed to threaten suffocation, induced me to dissuade her from taking any more while the experiment that was to vindicate her veracity continued. She has followed my advice, and finds every good effect attained from the occasional cleansing her mouth with a moistened rag; as the former object had been

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only to relieve her of a sickly faintish taste in the mouth. There has lately been a slight appearance of the menses, which she had thought completely to have ceased. She renders an average of a pint of urine in two days; which is very offensive, and of a high colour; and her skin is always moist. But the greatest phænomenon is her extreme emaciation, though she has less of the facies hipocratica than is common to consumptive patients, and is remarkably cheerful and urbane, possessing a far greater stock of ideas and intelligence than is to be found commonly in her sphere of life. Her circumference, measured round the loins, is 20½ inches, across the chest 28½, and across the hips 30 inches. There is scarcely the trace of any viscus to be felt in the abdomen; the bladder, uterus, and its appendages, are sunk beneath the arch of the pubes, and every thing else (that might be) is drawn up under the ribs, so that it cannot be perceived. From the lowest rib, the integuments descending to the ossa illii form an empty cord-like folding, and at the umbilicus the flaccid parietes abdominis may be readily rubbed over the lumbar vertebræ, and no kind of substance felt to intervene.—The grand trunk of the aorta may be traced by the finger from the place most immediately under the ensiform process of the sternum, where the loose integument is drawn down upon it, nearly to its bifurcation. It may be drawn a little from its situation over the spine, and thus by holding the skin across it with my thumb and finger, I have been able to make it apparent to the bye-standers, as they thus saw both its shape and pulsation. The watches have been faithfully kept, and (whatever may have wrought the difference if it exists) she says she thinks she is better and stronger than she has been these six months, and is certainly improved in health since her removal; her pulse has kept the standard of health, with daily exacerbations. She sleeps well, and enjoys a remarkably serene and happy mind. Her voice is strong, and holds out the full female exercise of that faculty. Her muscular power is such that she can conveniently raise, and support herself in bed. Thus, Gentlemen, the watch sitting at the time that I write this, (which must cease to morrow, as I engaged to see the woman safely returned to her habitation before I returned home) it is now the 16th day that she has been under the strictest scrutiny; and the 13th day that she has abstained from all fluids. She is now better in health than when the examination was instituted; and as far as from the corroborating testimony

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testimony of this evidence her veracity may be admitted, the 14th month that she has subsisted altogether without aliment.

I have simply stated facts, which, in the hands of the exalted Lovers of Physiology that read your Journal, may be in the way of rendering that assistance to Philosophical Research, which will amply remunerate my labour. I would forbear myself offering any theory, being confident of my incompetence, and that even the pursuit of such an object, would rather lessen the validity in the eyes of men of science, of what might have been better established by a fair and unbiassed narration. But in committing this to your care for publication, I shall anxiously wait for instruction from others, in the channel through which it has so often flowed to me.

I am, &c.

ROBERT TAYLOR,
Member of the Royal College of Surgeons, London.

Lane End, Staffordshire, Sept. 28, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN your last month's Journal some remarks are made upon Exomphalos, or Umbilical Hernia, in which your correspondent, Mr. Bush, considers himself as the projector of an advantageous and new plan of cure in the infantile species of that disease; and also conceives, to use his own words, "that it is taken for granted, that surgeons are agreed, that umbilical hernia scarcely admits of radical cure in the adult." Does Mr. Bush suppose that it is a disease beyond the reach of human art finally to cure, merely because the patient, whose unhappy lot it should be to fall on, had reached the adult state?

Umbilical Hernia, it is true, in general, is not of that alarming nature; I say, in general, because the majority are composed of omentum only; but when it is formed of a portion of intestine, or both, and becomes strangulated, how should the surgeon act, if the protruded parts are not returnable? Surely, if reduction of the contents of this hernial sac could not be effected, the knife in the hands

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of the skilful and well informed, would be the only resort, in order to save their patient; and this may be done with equal certainty and safety in strangulated umbilical hernia, as in any other form of that complaint.

It is, I presume, perfectly unnecessary to describe the usual modern practice of operating for umbilical hernia; but I would remark, that when the sac is sufficiently dilated, if the protruded parts are found in a fit state for reduction, and cannot be effected but by increasing the size of the opening into the cavity of the abdomen, it may be done without hazard in any direction, or the dread of dangerous peritoneal inflammation; but if the operator is fearful of wounding the ligament formed by the umbilical vessels, he may at all times avoid them, by making the incision upwards and outwards, on the left of the umbilicus; however, I am of opinion, from practical experience, that it is matter of little importance if the ligament should be divided. Many respectable modern authors I could quote to confirm this opinion.

The mode of radical cure for umbilical hernia, adverted to by the ancients; such as Guido, Albucasis, &c. was such, it must be admitted by all regular practitioners, as was at once extremely dangerous, excessively painful, and ineffectual to the proposed end, because they did not prevent a return of the disease; on the contrary, rendered every subsequent protrusion more alarming. The opinions and practice of such men as the above, but not of the "generality of Surgeons," might lead to the belief, that umbilical hernia in the adult scarcely admitted a radical cure.

Mr. Bush's mode of cure in the exomphalos of infants by pressure, is not by any means new, as the very plaster he describes was constantly used by my late worthy master Joseph Frowd, Esq. an eminent surgeon of Fremor, with the exception of the bandage of sticking plaster. The same plan I have for ten years invariably continued (securing the compress with a roller bandage) in numberless cases, and have found them individually succeed.

I beg it may be understood by your correspondent, Mr. Bush, that I have not any wish to arraign his chirurgical abilities, or his want of zeal in the profession; but I cannot conceive him well founded in his remark that exomphalos in the adult, "scarcely admits of radical cure," or in his reason, "that it is well known the danger which may

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may ensue by exciting inflammation in any of the cavities with in the abdomen."

It has fallen to my lot, though a young practitioner, to operate more than once or twice in this city, for several of the varieties of hernia, particularly femoral, with such complete success, as perhaps has given that confidence of which practical surgery alone is capable. It is not many months since I performed the operation for strangulated umbilical hernia in a female near fifty years old, with the happiest effect. In this case a portion of omentum, with the intestine, protruded, and formed a considerable tumor; every means of reduction had been tried, and all the horrible symptoms of the disease rapidly succeeding each other, the operation was considered the only resort; it was proposed to my patient with all that delicacy, sympathy, and feeling, which was demanded under circumstances so distressing; she immediately consented, and the event terminated in her perfect recovery.

I am, &c.

G. F. EDWARDS,
Member of the Royal College of Surgeons,

Walcot Parade, Bath,
Oct. 12, 1808.

No. 2.

ACCOUNT OF SOME CASES AND DISSECTIONS.

By Thomas Beddoes, M. D.

THE uncertainty of medicine, notwithstanding partial improvements, which make some figure by themselves indeed, but dwindle on a collective estimate, is, I apprehend, too likely to continue. Nor do I see how it should cease, till careful observation of the sick be combined, beyond any example, past or present, with early and exact dissection of the dead. Our civil and military hospitals, considered without complaisance, must be allowed to do the country credit —the military, from the excellent spirit of the medical officers, and the arrangements for the sick; the civil as demonstrating, upon the whole, that much charity of disposition pervades society. In the former, however, from numerous documents, just laid before parliament and the public, it is to be feared that intrigue can too easily contrive to domineer over tried merit; and the civil, as almost universally conducted, answer no one purpose more obviously

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than giving unmerited eclat to a few medical men; such as by their connections can once for all secure a majority of votes among the subscribers. Of both the most enlarged view is melancholy enough. They are, if not quite barren, yet wretchedly unproductive of that sort of service, which, under a better system, they would yield to the public at large. For want either of voluntary combination, a thing scarce to be expected, or of (what is surely very feasible) regulation by authority, which, from regard to the general good, shall compel, as an absolute duty, the preservation and publication of every material fact, and thus make these humane establishments a thousand fold more serviceable to humanity, they furnish very equivocal testimony to the sense and spirit of a people, otherwise so enlightened and energetic as the English. Instructive phænomena must occur every where in turn; yet these are at present often confined to a petty circle, and soon totally sunk in oblivion. Must it not sometimes happen, that the connections and descendants of the observers themselves, much more, remote individuals, shall fall a sacrifice to disorders; for remedying which, the wider diffusion of these very observations would suggest the means? What is known in so narrow a sphere, for so short time, and to so little purpose, does by no means exhaust the topics of regret, supplied by our institutions for the sick. The opportunity for many discoveries is lost, because that ardour, which would spread into the obscurest corner, is not fully excited in these conspicuous stations of practice. Were it understood, how constantly inward diseases are the cause of perplexity and blunders, (a fact which, in regard to persons in the highest sphere of life, round whom the supposed brightest luminaries of physic were assembled, has repeatedly, of late, come to my certain knowledge) the moral of such a representation would be greatly strengthened. Nor should I be surprized to hear a warm-hearted spectator of mankind, if he were aware of our helplessness, and accustomed to discriminate between substance and shew, performance and profession, pronouncing that, *in a civilized state, physic ought not to be at all tolerated, or that much more effectual means than any in use ought to be taken, to insure discernment to the physician.*

Among disorders, where practice is unsettled, frequently therefore unsuccessful, and probably destructive, must be numbered, (notwithstanding some useful modern suggestions) those in which the head is affected, or a disturbance of the sensorial functions is accompanied by extreme debility.

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lity. On this subject, well known discussions had rendered me particularly desirous of recurring to Nature herself. The occasion has offered itself oftener and more favourably than I could expect. In judging of the state of parts after death, it is, as in other instances, where any niceness of comparison is requisite. Upon impressions, made at long intervals, little reliance can be placed. He who examines a body once only in a quarter of a year, or once in a month, will be able to form but an insecure judgment, except in very palpable changes of structure. May I therefore be permitted to state that, besides long and frequent familiarity with the interior of animals, I was, by favour, allowed once to assist at as many as three recent human dissections in a day, where one or other of the parties present had observed the symptoms. I have repeatedly assisted at three in a week; the subjects commonly fresh, and a leisurely examination of the parts principally diseased, often following the general inspection. Though I may be exceeded in this advantage by a few, I yield to no one in the cultivation of an acquaintance with the most accurate descriptions and engravings. These instruct more or less as the party is prepared by knowledge of the objects; with which I have not neglected to compare, upon the spot, the the most esteemed plates. I have besides canvassed appearances at the moment, or afterwards, with observers from various climates. I hope, therefore, that the following Reports may deserve to be taken into account with others. In each article I give its peculiar circumstances, as the date of the dissection, &c. I relate the whole, not pretending at present to class facts, or to assign to particular symptoms particular alterations, though I constantly perceived appearances little connected with the fatal complaint. As no account, however, can put the reader on a footing with the spectator, some inferences shall hereafter be drawn, which observation alone could supply, lest any thing material should be wanting.

CASE I.

X. X. æt. 35, slender, puny, valetudinarian, mother of several children, recovering slowly after child-birth, then, and at other times, for near twenty years, subject to such cough and feverishness, as excited the apprehension of consumption, though there was no title to it from either parent; subject to sick head-ache; with dark hair, eyes, and skin.

I did not see this patient during the present illness; but

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after the first fortnight, was consulted by a medical friend, in the out-skirts of London, who nursed her from the 11th of May, 1808. For six months her health had appeared to improve, except that a few weeks ago she had had cough with feverishness, which had gone off.

May 2d, much fatigued by exercise in the meridian sun. 3d, was only sensible of having caught cold. 4th, pain of the left side of the chest; dyspnœa; short cough; leeches and blistering seemed to give relief. Soon after, the pain appeared to remove to the epigastrium and loins, and was accompained by fulness of abdomen, constant eructations, borborygmi, and constipation; fæces hard, scanty, dark. For this she had purgatives with calomel. Extreme debility now led to apprehend the accession of rapid and dangerous typhus.

Wednesday 11th, pulse 150. Thursday morning at 9, A. M. great prostration of strength; insensible, except roused; some muttering delirium; pulse 130, very irregular, frequently intermitting; "*not so feeble as I expected.*" Action of the heart very strong, as appeared from the touch and sound both. Tongue pale, very little incrusted; *no head-ache;* less pain and tension of abdomen, borborygmi; urine scanty, not high coloured; two or three stools a day, almost black, fœtid, with little substance. Short, frequent, loose cough; little pain remaining in the chest.

℞. Calomel gr. ii. Rhei. gr. v.; with mist. salinos; containing of infus. sennae t. ʒiii. every third or fourth hour.

For food gruel with a *very little* wine; which last, on some little amendment of appetite, and great cough during two nights, was withdrawn on the 14th. Afterwards acids were used with digitalis, mercurial inunction, and tepid ablution during the hot stage.

The hepatic action as indicated by bilious stools, and the violent beating of the heart, continued uninfluenced by any medicine. The febrile heats were much assuaged by ablution, but recurred with violence, and increased pulse from the 20th to the 27th. Abdomen soft, and free from pain, only a little distended by wind; stools; sleep absent, disturbed, or short; little delirium, as before.

27th. Slept from midnight till 5 A. M. composedly; sick, repeatedly vomited fresh green bile; stools ceased. Noon, oppression about stomach, rising in throat, dry retching. Stimulating glyster without effect. Now she began for the first time to complain of head-ache; but having

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having been accustomed to this with a bilious stomach, she supposed that the cause was now the same.—Evening, the head-ache suddenly increased; accession of delirium. Two physicians suppose a transition of morbid action from the liver to the brain with sudden effusion. They forbid bleeding and vomiting; advise digitalis, sinapisms, vesication. P. 120, not feeble. Coma towards morning; fluctuations in the heart and pulse. Afternoon, respiration laborious; pulse somewhat strong, heat considerable, (face rather florid, notwithstanding death had been hourly expected.) Six ounces of blood drawn. Pulse sensibly influenced, not much weakened, face paler; respiration slower. In a quarter of an hour pulse as vigorous as before, heat of the whole body *intense*, profuse perspiration following. Leeches applied to the temples. Blood from arm decidedly inflamed. Death about 3 A. M.; the pulse maintaining its strength till 1, and the perspiration profuse.

I know not whether the reader, who may first pause to deduce the internal state, will be disappointed by the following account; which I give, as received, in the words of a celebrated anatomist in London. I know not at what distance of time the dissection took place.

Stomach contained about one ounce of dirty greenish liquid. Its condition, and that of the bowels, natural. Colour and substance of the liver entirely free from disease; gall-bladder somewhat larger and more prominent than usual.

On the surface of the lungs, near the left branch of the trachea, appeared hard and irregular projections. *They felt as if scratching the hand, when it was passed behind the left lung.* They adhered to the pleura pulmonalis, were white, and distinctly osseous; seven or eight were counted. There were adhesions posteriorly to the pleura costalis. On dividing the substance, at the lower extremity, some congestion, and a small ulcer, (abscess?) were observed; right lung quite healthy. In each cavity, some bloody liquid; as also, and much more abundant, in the pericardium.

The general appearance of the heart was sound. But from the tricuspid valve arose a large irregular indurated substance, of a whitish yellow colour, attached to the heart, and extending to the apex.

Is not this, with the profuse bloody effusion and constant excitement, proof of inflammation of the heart?

A conical polypus, stretching nearly through the ventricle,

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tricle, adhered to this matter, obviously of much more recent formation; the part nearest the valve having the appearance of lymph lately coagulated; the lower part of a deep red colour, like the ordinary crassamentum.

Beneath the *dura mater*, large serous effusion, appearing pearly from being seen through the tunica arachnoidea. The effusion extended on each side around the extremities, and below the base of the brain. In some parts, the fluid was of a yellowish colour, and some opacity, slightly resembling pus, or rather mucus, secreted in some undefined states of membranous disease. Rather more fluid than usual in the lateral ventricles. In other respects, the brain appeared natural.

CASE II.

R. G. a sufficiently stout youth of 18.—The following is an abstract from the Journal of his case. I did not see him till after death. Violent pain of limbs, ascribed to a cold; complains of being chilly; skin dry and hot; p. 90, small; tongue slightly furred; bowels rather loose.—Emetic and twenty drops of tinct. of opium afterwards. Evening four stools.

18th. A restless night; delirium; tongue furred; skin hot; opiate; blister; enema, whence two stools.

19th. Bad night; sweats. Antimon. tart. gr. ii. aq. ℥vi. cochlear. ii. o. h.; sweat continued in the evening; complains of his chest; enema followed by two stools.

20th. Tolerable night; much the same otherwise. Antimon. tart. gr. i. and æther v. added to his former ℥vi. mixture; enema and two stools. Tinct. opii et vin. antimon. gtt. xxv. h. s.

21st. Good night, yet rather worse; tongue fouler; acid mixture with opiate and antimonial; enema. The day bad; delirium; two loose fœtid stools; tongue very foul; pulse 86, weak; "*disease putting on a putrid diathesis*;" skin hot and dry; camphorated opiate draught; lemons.

22d. In all respects worse; pulse 96, weak; irritable; loose stool; blister; camphor mixture with antimonial and æther; wine; blister again in the evening.

23d. Bad night; cold clammy sweat; died at half past four; opened next day.—So little deviating from a healthy state in any of the cavities, that after a full inspection of all the cavities, two surgeons accustomed to the opening bodies, asked each other, "*whether any thing had been seen here, which could account for the patient's death?*"

The brain and its membranes shewed none of the appearances

pearances which can be considered as inflammatory. The vascularity was even far below the standard of coloured engravings, professing to represent the healthy state: so was the number and size of the bloody points in the medullary substance. No effusion, remarkable hardness, or softness in the brain or cerebellum. Some slight adhesions in the thorax; heart rather flabby; the stomach was ruddier, especially towards the cardia, than in carnivorous animals killed in full health, or than in the human subject a very short time after death, in which, when there is no reason to suspect disease, the surface is quite pale.* But the present degree of ruddiness was indeed far below what we can venture to consider as high state of disease, and below what I have repeatedly seen in the same seat, and, from the analogy of inflammation elsewhere, suppose fatal.

CASE III.

Another man, aged 28, had similar symptoms, only there was more delirium and bilious diarrhœa. The treatment appeared from the notes, (for I did not see the patient) very similar; the appearances in the head and stomach (dissection taking place the day of his death) very similar. The liver was hard and of a large size, but from the patient's habits, the alterations were probably not altogether recent, and can hardly be supposed fatal, if they were. The reader perceives the meagreness of this account, so does the writer. The scalpel often makes the most satisfactory disclosures. It is sometimes a miserable pathological tool; but it should be impressed upon us all, that similar sensorial movements may, or may not, be accompanied with given changes of other parts; that the present or a future age may bethink themselves of the means of distinguishing the difference, and even of reaching the source of the symptoms in the nervous matter itself.

CASE IV.

B. J. aged 21, taken ill on the 16th of June, 1808, with slight

* Die Sept. 16to. e. g. ventriculum phthisici, calentem adhuc et prorsus sanum (nisi totum fortasse corpus sanguinis inopia laborasse) bihorio vix post mortem elapso, adstantibus Dnis *Felix*, *Marks*, *Lawrence*, et alio quodam chirurgo, lustravi. Tunicis integerrimis, extantibus pulchrè rugis, color erat pallidus, subflavus seu potiùs diluté bruneus. Procul dubio ventriculos omnes, quos viderim typho extinctorum, si ad hunc conferas, inflammatis adnumerare oportet.

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slight pain in the head; did not apply for aid till the 18th of June; at that time the pain continued, attended with slight febrile symptoms; p. 90; nausea with a good deal of cough; free expectoration of mucus; not any pain about the thorax. He referred the pain in the head to frequently coughing and constipation.

Bowels opened by a cathartic; nausea and pain in the head continue; p. 90. Haustus, emeticus statim. Diet, tea and gruel.

19. Emetic operated well; feels less pain in the head, p. 90; skin moist, cough less. Mist. salin. antimon. c. tinct. digital. 4ta quaque hora.

P. M. Much better, p. 80. Mist. u. a.

20. Pain in the head with sickness increased this morning, skin moist and cool, p. 80. bowels open. Mist. a. a. Capt. cras primo mane, pulv. ipecac. gr. xviii.

21. Pain in the head continues; emetic operated well; quite free from febrile symptoms; p. 80. App. empl. vesicat. capiti, mistura. u. a.

22. Pain in the head continues without sickness; p. 84; blister rose well. Mist. u. a. empl. vesicat. perpetuum.

23. Pain in the head rather less; p. 90, full; bowels costive. ℞. calomel. gr. v. ext. coloquinth. c. ℈j. M. f. pil. vi. statim sumendae.

P. M. Pain in the head increased; eyes have a glassy appearance; pupils dilated, will contract but little from the light of a candle; intellects deranged; p. 80; skin cool; bowels continue costive. Effluat sanguis ad ℥viii: calomel gr. x, statim; enema stimulans statim et 4ta quaque hora repetatur si opus erit.

24. As yesterday; pulses rose upon taking away blood to 120, are now 90; not any appearance of inflammation upon the blood. Bowels still costive. Effluat. sanguis ad ℥xii. calomel. gr. v. 4ta quaque hora. ℞. Decoct. commun. ℔j. tinct. sennæ. ℥ß. extr. coloquinth. c. ℈j. natr. vit. ℥ß. M. f. enema, 4ta. quaque hora. Epispasticum majus dorso. Emplastrum perpet. capiti; pedib sinapism.

25. P. M. In every respect as this morning; p. 88. Opened temporal artery, and drew off 12 ounces of arterial blood; pulse began to sink after taking away about 10 ounces; not any marks of inflammation upon the blood taken this morning. Contin. enema stimulans.

8. P. M. Pulse 80, rather feeble; delirium and other appearances of the head as this morning. Bol. Cath. u. a. enem. u. a. The glysters are constantly voided after being retained

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retained about two hours, with the assistance of an attendant, a little discoloured with fæces.

25. 6 A. M. Pulse 90, rather intermitting; skin quite cool and moist; delirium and appearances of the eyes as before. Sinapisms have occasioned vesication; bowels continue in a state of constipation. ℞. calomel. gr. v. P. antim. gr. iii. ft. bol. 4ta quaque hora um. Haust. seqt. ℞. Tinct. sennæ ʒiii. Infus. sennæ ʒß. Enem. u. a.

11 A. M. in every respect as this morning.

4 P. M. ditto; p. 80, intermitting.

9 P. M. ditto; p. sinking fast.

26. Died this morning about five o'clock.

I, myself, saw this patient once only on the morning of the 24th; stupor or coma, seemed to alternate with considerable agitation. I was much struck with the glassiness of the eye; the pupil was insensible, the pulse was undulating, and breath cold. Being asked if any plan of practice suggested itself to me, I agreed with others, in considering the case as hopeless, but said, if I were compelled to attempt something, it should be the application of boiling water to the scalp.

Nothing was done, except as above stated.

The dissection took place the evening of the day of death. Little blood, on dividing the integuments. The cranium shewed no vestige of injury. Vessels of the dura mater were turgid, particularly the posterior; at the junction of the sagittal with the lambdoidal suture it was very vascular, thickened, and adherent to the cranium, as also was the falx, and all the membranes to one another, and to the hemispheres of the brain; these and the other parts being a conglutinated mass. The left hemisphere, near the longitudinal sinus, was covered for the area of half a crown with coagulating lymph (fibrine). Vessels of the pia mater by no means turgid; medulla firm, not hard; not marked more, indeed scarcely so much as in representations given for natural, with bloody points; from two to three drachms of lymph in the ventricles; choroid plexus not particularly red or charged with blood, only one turgid vein. There was an appearance, sometimes called an hydatid; it was oval, yellowish, corrugated like the capsules of some fruits, largest diameter not exceeding a goose quill, and three-eighths of an inch long; surface of the corpora striata redder than common. *Tentorium cerebello super extensum* vascular, as if inflamed; vessels below injected. *Thalami nerv. optic.* and the optic nerves free from all appearance of disease. Within the thorax, adhesion

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hesions between the pleuræ; lungs, particularly middle lobe of the left, being tuberculated; tubercles solid, all less than garden peas; membrane of liver, of spleen, and also the peritonæum attached to the diaphragm tuberculated.

This was written immediately on examination. The tubercles *in* the membrane of the spleen were hard and calculous. This viscus being immediately put for 24 hours into an acidulated liquor, I was much surprized at a foam on its surface, arising from the action of slow effervescence; the parts were most perfectly fresh. The calculi (or tubercles) were mostly dissolved out; the cells within the membrane of the spleen being laid open, and just enough to shew the facts remaining of the calculi; not enough, I fear, to ascertain their composition.

Besides Dr. Edgeworth, Mr. Lawrence, and another medical gentleman, who were present at the dissection, the parts have been viewed by Dr. Felix and Mr. Marks of the French prison, and by others. Stomach inflamed, particularly up towards the cardia; the inflamed parts chiefly dark red, with a little florid appearance; portions of the jejunum and ileum inflamed; gangrene had commenced in one spot; intussusception at two places, but these not inflamed.

CASE V.

A. B. middle aged, well made, accustomed to moderate exertion; said he had been unwell nine or ten days. When he applied for advice, with fever and debility, on the 20th of July, at which time the fever had assumed the typhus character. Pulse 86 in a minute, and small; skin soft, tongue brown, heat moderate, frequently flushed during the night, and perspired very much; bowels regular, appetite bad, thirst not very great.

On the 21st, p. 100 in a minute, tongue brown, moist; skin hot; slept very little in the night; perspired a great deal; says he is perfectly easy; bowels open, thirst moderate.

22d. Slept a little this morning; complains of pain all over his body. P. 120 in a minute, skin hot, tongue brown and dry, teeth furred; diarrhœa came on in the night; feels more thirsty.—22d. 8 P. M. Pulse 130; diarrhœa stopt; in other respects continues as in the morning; dozed a great deal in the day.

23d. P. 100, skin soft, tongue and teeth cleaner; passed a quiet night; slept some; perspired very much; had

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had two evacuations; mouth sore; has a slight ptyalism; very thirsty.—23d. 8 P. M. Pulse 104, skin hot and dry; sponged with vinegar and water; he has had two motions during the day.

24th. Passed a very good night, and in most respects as yesterday.—24th. 9 P. M. Pulse 130, small; tongue moist; dozes and perspires a great deal; feels perfectly easy, and less thirsty.

25th. P. 120, skin soft, tongue moist; slept tolerably in the night; bowels open.—8 P. M. Continues as in the morning; p. 128.

26th. P. very quick and small; has been rather delirious at times in the night; had two motions since the evening; skin soft, hands feel cold; every thing taken is vomited up.—26th. 8 P. M. Pulse 140, small, skin hot and dry, tongue furred; since 10 o'clock this morning what he took has remained on his stomach.

27th. He appears much weaker; p. exceedingly quick and small; other symptoms as yesterday; is now perfectly sensible.—8 P. M. Continues as in the morning.

29th. Pulse feeble and quick, skin soft, tongue much furred; passed a restless night, was delirious; extremities cold, bowels open. He died at six o'clock in the evening.

The general treatment, I was informed, besides the sponging, as mentioned, consisted of antimonials, opiates, acids, and wine, in the last days. I was particularly told that he had never appeared hot enough for affusion, according to Dr. Currie's rules. I never saw this patient alive, but examined another in the same room, said to be affected in the same manner, except that he had great and steady heats, and the affusion was used. This recovered very slowly.

July 30. Body opened at noon, perfectly fresh; no froth, effusion, or remarkable external change; hardly any livid patches (death spots) on the depending parts of the skin. While the cranium was most carefully sawing through, effusion took place, first of bloody serum, afterwards of blood from the left ear, not one drop having previously flowed. The cranium being neatly separated, this effusion was ascertained to come from the *meatus extern. audit.* It was absorbed by the linen. We (two surgeons and myself) estimated it at 2 oz. The dura mater exhibited preternatural vascularity; the arterial trunks being wide in the diameter; their centre occupied by a crimson coagulum; the sides looking white and tendinous; an appearance

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common after hydrocephalus internus, and other inflammations, but not peculiar to these; only the appearance seems favourable for judging of the size of the arteries; longitudinal and lateral sinuses not turgid; veins in the sulci of the brain rather full; arteries every where ramifying over the eminencies, and finely injected. Brain fresh, firm, not hard. On slicing the left hemisphere, innumerable bloody points were seen in the medulla, and also less numerously and strikingly on the cut cortical part: from these points, on making a parallel cut with a broad thin knife, blood very freely issued; lateral ventricles scarcely contained a drachm of liquid; vessels on the *corpora striata* turgid; choroid plexus a dark bloody mass, six times its average size; its vessels all turgid; arteries visible as crimson streaks upon the optic nerve, fro the cut sub-m stance of which oozed spots of blood in several points, between the centre and the circumference. Pia mater under the anterior part of the brain excessively injected. The dura mater on the hollow of the occipital bone much more vascular than any where else. If from gravitation after death?

The cerebellum, medulla oblongata and spinalis, offered the same appearances of injection externally, and bloody points internally.

Thoracic muscles firm, ruddy, fresh; surface of the lungs offered a white ground beautifully diversified with dark specks. They were spungy and healthy, except the back of the superior lobe on the right side, which was denser, and more liver-like than could well arise from gravitation of the blood in the time. The membrane lining the trachea was of a deep red, and appeared highly inflamed, so that the most successful injection could scarce attain to colour it so deeply and so uniformly. This extended into the ramifications, [The appearance led me to enquire, if there had been any cough during the illness; there had not been the least, nor any dyspnœa but what might arise from debility.] Heart small, firm, natural. Cavity of abdomen natural. Omentum without fat, excessively injected. Strokes with a fine pen and crimson ink, in some places as close as is consistent with distinctness, in others far broader and apart, the paper representing the transparent membrane, would give an idea of the appearance; spleen thrice the natural size, otherwise seemingly healthy; pancreas hard, liver rather pale; from the gall bladder, which was ruddy and streaky, not the least transudation of bile, nor could it be guessed what coloured liquid

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liquid it contained. It was moderately full, and being punctured apart, discharged a yellow liquid, charged with mucous flocculi.

Another circumstance was discovered in this patient, exhibiting, if I mistake not, the first rudiments of a curious bilious affection, not described in any of our late treatises, yet in general easy to be known, and when known, accounting for certain appearances in disease, and directing treatment. I shall some time explain it, if no one anticipate me.

Stomach with the rugae firm, and well preserved; villous coat intire, pale, and free from inflammation every where towards the large curvature. Towards the cardia a patch chiefly of the most highly florid inflammation, of the extent of a crown piece. It continued less intense into the lower part of the œsophagus, not high up. Intestines every where shewing patches considerably inflamed, particularly the colon: a small tract of the jejunum was emphysematous, the air beneath the peritoneal coat; adhesions between the cœcum and colon; kidneys surprisingly flabby for so fresh and firm a subject, not diseased within. The notes of this examination were written on the spot, as the appearances presented. The same attention was paid to accuracy in some other instances, here related; and when the account was deferred till I had reached home, it was always drawn up immediately, and now and then confronted with statements by other persons present. Only on one occasion were the appearances surveyed by two pair of eyes; in general, three or four people were present.

The absence of cough, &c. in this case is a striking fact, and the vomiting on the 25th, independent of medicine, with its cessation on the 26th, is another.

The two gentlemen present, with myself, repaired immediately from this inspection to the patient, whom I have mentioned, as similarly affected. We roused him from a slight delirious stupor; his faculties were then distinct. I pressed on various parts, and he said he felt no pain; but on doing the same, as well on the trachea as on the pit of the stomach, with intermediate removal of the finger elsewhere, he acknowledged pain in both those places, and only those; and I believe, in fever, it will be of importance to prosecute this method of search more minutely than has ever been the practice. Clearly detected soreness should encourage bleeding at an early stage.

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CASE VI.

This patient I did not see alive. W. J. aged 24, accustomed to moderate exertion, and temperate; complains, August 29th, of very great debility, and states, that for three days previous he had, on an average, from fifteen to twenty motions in the twenty-four hours, accompanied with incessant vomiting, a continued pain in his stomach; and he then described himself, as feeling excessively cold, although his skin was hot and dry, and pulse 100. Capt. haust emet: statim. post operat: solution: salis.

Evening. The emetic and the aperient operated very favourably, and he feels himself considerably relieved. Tongue furred, skin feverish, pulse full, and 80. Haust. salin. anod. with t. opii gtt. xx.

30th. Had a tolerable night, and three very loose motions; skin warm, pulse 74, heat moderate. Considers himself much better. Solution: antimon. tartar. gr. ii. in aq. ℥vi. cochl. ii. omni horâ.

Evening. Little alteration. Haust anod.

31st. Had a very restless night; stools frequent and dark, pulse 100; tongue foul, skin hot and dry. Consider the antimony not to have had time to excite a diaphoresis. Cont. solutio antim. tartar.

Evening. Skin moist, pulse 84. The stools less frequent and of a better colour. Haust. salin. anod.

Sept. 1st. Tongue very foul, stools involuntary, p. 100; pain in his head; has had a very restless night, occasionally delirious. Emp. vesicat. capiti, pulv. ipecac. comp. ʒß. sextis horis.

One o'clock P. M. No appearance of approaching diaphoresis. On taking the Dover's powder, he instantly threw it up, accompanied with a quantity of green matter; the disease now synochus soporosa. ℞. Pulv. ipecac. gr. xv. statim. wine two gills.

Half-past three. P. M. The emetic operated mildly; he has had one motion of a more favorable consistence and colour. ℞. Mist. camphorat. ℥vß. tinct. opii gtt. xl. vin. antim. ʒi. æther. vitriolic. ʒiß. cochl. li. omni hori.

Thirty-five minutes past eight, P. M. The patient has been extremely delirious; about five o'clock he, however, became more collected; had two motions of much better appearance, but very loose; pulse 80; tongue very foul and very black; great predisposition to vomit. Wine two gills. Haust. camphorat. anod. statim. emp. vesicatorium inter

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inter scapulas; yeast two spoonfuls every hour, omitting every other medicine.

Sept. 2d, morning visit. The yeast, after the first dose, was repugnant to him; no means or persuasion could get him to repeat it; he has had but one stool during the night and that very dark, and very offensive, yet not so much so as those of yesterday; he has just had however, two more motions, nearly of the same description, *immediately* succeeding each other; occasionally delirious, but the intervals of sanity much longer. The blister between his shoulder rose extremely well, whereas that applied last night, has at present no appearance of effect; skin warm, pulse 100; tongue very black, with a black incrustation, and very dry. An attempt to get down some cordial mixture has failed, as well as a succeeding one to get down some simple saline mixture, in a state of effervescence; fancies he could take pills. ℞. Ext. opii gr. j. pulv. camphor. gr. x. fiant pilulæ statim v. sumendæ, et rep. tertia quaque hora; a pint of sherry and lemons.

Two o'clock, P. M. He could not take the pills, as in swallowing one, the vomiting of the green matter returned in a greater degree than before; no stool since morning visit. Pulse and tongue, as before. ℞. Antim. tartar. gr. ii. aq. puræ ℥ij. capt. ℥ß. statim et rep. o. horae dimid. donec vomitum cierit.

Evening visit. No alteration since the morning, except that since the emetic the vomiting has ceased, and he keeps the wine on his stomach, the only thing he can now take; the debility is extreme. Habt. tinct opii gr. xl. h. s. in his wine.

Sept. 3d. Vomiting returned; two motions as before described since last night. Every other symptom much worse; he now refuses the wine. Brandy half a pint with lemons. Spt. æther. gtt. xx. tertia quaque hora. Evening, a-sleep.

Nine o'clock, P. M. Symptoms the same, but much worse; no motion. Enema comm. statim.

4th Morning. Wholly insensible; repeat the brandy and lemons; died at half-past 3 in the afternoon. Body opened between 7 and 8 in the morning of the 4th. On the back some death marks; not a drop of blood from the cut integuments of the cranium, nor did any ooze from the divided temporal or occipital muscles; the scalpel was scarce stained red. After dissection of the head, only a slight patch of blood on the block which supported it. Vessels of the dura mater in a medium state, less injected than in

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Mr. Charles Bell's 1st plate, which I carried with me for comparison; the veins in the sulci less turgid, and the cut medullary substance, in several sections, shewed far fewer bloody points than he has exhibited. Substance of the brain firm, corpora striata slightly vascular; choroid plexus by no means deep red, turgid, or large; two or three drachms of lymph in the ventricles; nothing different or remarkable in the cerebellum.

Thoracic muscles firm, of a fine red; no vestage of putridity; lungs, liver, gall-bladder, healthy; no transudation of bile, gall-bladder detached, and a table spoonful of dark green bile received pure into a clean phial. The stomach was full of a strong smelling darkish brown fluid, of which some was secured in a phial: villous coat no where abraded or dissolved, but every where covered with bloody dark brown mucous matter. This being wiped off, a florid inflammation was seen every where dispersed in patches, but particularly high and thick about the cardia. There appeared intense, red spots, as if ready to pour out arterial blood; nothing verging to grangrene. The intestines were inflamed in spots, and every where full of the same offensive liquid as the stomach.

This copious liquid appeared to consist of blood, bile, (it differed altogether from the contents of the gall-bladder) of mucus, and other secretions. Its smell was somewhat alliaceous, clearly distinguishable from putrid, nor did it tarnish bright silver. The medical gentleman, who performed the dissection principally, had been accustomed to open bodies after the yellow fever, and observed that it differed in scent and colour from black vomit, which nearly resembles coffee grounds. This was confirmed by Dr. M'Gregor, who has watched the sick and prosecuted dissections in so many climates. I shewed the liquor to him before it was sensibly altered. In some future observations on animal fluids I may enter farther into an account of it. That it was mostly secreted by the stomach and bowels, was probable; but another case had already afforded me clear proof of this fact, as I shall state hereafter.

Within a few months, I have been present at the opening of four bodies, where death was certainly instantaneous in two, probably so in a third, and such as might be called sudden in the fourth.

CASE VII.

An intemperate middle-aged blacksmith, had been last winter confined some weeks by a complaint denominated asthma.

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asthma. Thinking he should soon be able to return to his workshop, he walked up to one of his house windows, from which it was visible; and at the window dropped down and expired without a groan. A medical gentleman, called in haste, attempted to bleed him. Next morning (I believe) he was opened. Some blood having flowed from one ear, it was confidently expected that the head would exhibit much congestion or extravasation; but the membranes had their vessels neither turgid nor injected. The surface of the corpora striata was faintly vascular, the choroid plexus not large, or full of blood. There was scarce a bloody point in the medulla. The substance of the brain was exceedingly soft and easy to tear. In the chest was nothing but a small solid tubercle, which, perhaps, never excited any symptom. The stomach and abdominal viscera were free from any apparently fatal change. An hydatid, the size of a nut, was found rising to the surface of the kidney.

Instances like this are familiar. They abound in the papers belonging to foreign medical jurisprudence, yet it requires ocular demonstration to place implicit confidence in apoplexy, the opposite to sanguineous; and the disappointment will be greater, where external effusion of blood takes place. But the opposite results of inspection are strikingly analogous in apoplexy, and in typhus or other fever.

CASE VIII.

A young woman, dark and robust, was early subject to startings in her sleep, and to frightful dreams, from which she awaked for sometime delirious. From her 8th to her 19th year, these symptoms were not complained of. Then a domestic vexation was followed by a fit, from description epileptic, or certainly violently hysterical. Such fits recurred, especially from chagrin, at no distant intervals. She must have been aware of their approach, as she was said to lock herself up alone before they came on. She had engaged in an active business though single, and had given imprudent credit. The day of her death, she wrote a letter to one of her debtors: and the prospect of loss probably preyed on her irritable mind.

July 4th 1808. (Being then about 23 years of age) she went from her lodgings to breakfast in her shop, at two or three hundred yards distance. Here she eat a little and drank tea, and about 9 A. M. seemed to a relation's ser-

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vant very low spirited. She was at first pale, afterwards flushed, complaining so much of her head, and of her head only, that the girl brought her a pillow, against which to lean it. At 11 an acquaintance found her in the shop, complaining also greatly of head-ach, and saying she had not long to live. About this time she had begun a letter, which I saw, to her mother, repeating, in the melancholy prolixity of desponding affection, that she should live but a few hours, and that she hoped they should meet in a happier world. Her acquaintance returning by noon, found the shop door fastened. When it was forced open, the patient was found senseless in a fit. A medical gentleman found her about one "in every respect," to use his own words, "as is usual in common cases of fits." He left her expecting she would recover. About three P. M. she did recover enough to recognize a child, her relation, stroking her arm, and uttering a few words collectedly, but immediately relapsed. Another medical gentleman ordered her a table spoonful of a solution of x grains of tartar emetic in 6 oz. of water every half hour, of which it is believed four doses were forced down, but without effect. At four the first attendant found her foaming at the mouth with a bloated countenance, lividness of the lips, face, and hands, appearance of suffocation, full pulse, and damp skin. This was nearly her state at first. He divided the temporal artery. This yielding scarcely any blood, he took eight oz. from the arm. After nine P. M. I found her with open mouth, stertorous respiration, black tongue, p. at the wrist 86, full; carotid and temporal arteries beating moderately; pupil much contracted, insensible, skin clammy; a quarter before ten o'clock she died.

At 7 A. M. next morning, she was opened; Mr. King, surgeon, Hotwells, Mr. Rolfe of Bristol, and two medical pupils being also present.—Abdomen had swelled during the night; much foam had issued continually, as the nurse said, and was actually issuing when we assembled, from the nostrils; ten hours after death.

The scalp was divided some time before the cranium was sawed through; large drops of dark, speedily coagulating, blood issued on the first incision, and in half an hour, (during which the other cavities were opened) it amounted to perhaps an ounce. Vessels of the dura mater large, and unusually injected; veins of the p. mater in the furrows turgid; crimson vessels finely ramified, in vast numbers, upon the eminencies of the brain, exceeding, perhaps, Mr. Ch. Bell's highly coloured pictures. Substance of the brain

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brain remarkably soft and flaccid; wherever the medulla was divided, blood started from crouded points, and continued to ooze on slight pressure; little lymph in the ventricles; many vessels ramifying on the corpora striata; scarce any vestiges were left of the corpus lucidum; (I have seen this absorbed in hydrocephalus); cerebellum amazingly blood-shot, its substance soft and spungy; blood, as before, started from every point where it was cut.

Lungs very healthy; coronary vessels and left ventricle of the heart turgid with blood; in the abdomen was a slight red appearance on the surface of the intestines, particularly those depending; colon contracted in places; stomach externally white, and its substance thick, containing a good deal of air, with four ounces of a mucous and bilious fluid (which being examined by the senses and chemical tests, was found to contain no suspicious ingredient). The rugae of the stomach prominent; its interior extensively, highly, and floridly inflamed, particularly about the cardia. Besides the florid redness, one patch, less than half-a-crown, was livid, and as one of the spectators thought, abraded. I could only perceive more spunginess of the villous coat than elsewhere.

In the ovaria were hydatids; in the Fallopian tubes, an indistinct praeternatural formation; in the uterus a spungy vascular substance, difficult to describe, but totally different from any product of conception. An oval ball of thread with blood vessels intertwisted, and lining the sides, will give some gross notion of the thing. It shewed nothing membranous like the coats of the ovum; vagina large; little appearance of hymen.

It was impossible to contemplate a case, like this, for five minutes without certain suspicions, particularly as the patient had written a prediction of her death within a few hours. Upon weighing all circumstances, my own suspicions totally vanished, and I believe those of the other medical persons. The sense of imminent dissolution belongs to nervous affections, and I suppose that this fact goes to prove, that an ingenious distinction between hysteria and epilepsy does not hold good; or was this hysteria ending in apoplexy? A girl of good character afterwards attested to me, that this patient ceased to menstruate only on Saturday night, the 25th of June, nine days before her death. "She *shifted herself on Sunday morning*," was the expression of this girl, her bed-fellow.

The existence of such intense inflammation in both the stomach and head is remarkable It appears as certain as

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any thing can be, respecting internal movements, that the head was here first affected, since she eat and drank after the head-ache became very severe, and did not at all complain of her stomach—which perhaps is less conclusive, as nobody pressed it till I came, and then sensation had long been abolished. Some facts which I have quoted from De Haen in my *Researches on Fever,* coincide most strikingly with this *projection of inflammation* from the head. I shall not now enlarge upon the topic.

I have met with evidence enough of inflammation wandering from external injuries far over the system.

The following fact is the only one which I shall give at present

A large mongrel bred spaniel was struck by a thrown stone, on the right side of the loins. A few days afterwards, being tapped or patted on the spot, he howled prodigiously, as if in most violent pain; he thenceforth began to droop, hung his tongue, yet eat and lapped a little; contrary to his habits, he grew fierce towards his own species, sallied forth to attack all that passed; bit a cat of the house, an old favourite of his own; never tried to bite any of the family; died in a fortnight. This I learned. August 4th, after being dead two nights and a day it was opened. The delay was unlucky, but the distinction between the condition of parts, even in the same organ, was still striking; kidneys gangrenous; the right, over which the blow had been received, most highly so, almost a fluid mass of putrefaction; stomach and intestines highly inflamed *in patches*; liver inflamed; trachea of a brown red, with uniform intense inflammation; upper part of the œsophagus the same, but it was pale and natural below, nor were the bronchial glands or the salivary inflamed. Vessels of the membranes of the brain much injected.

CASE VIII.

A full, bloated, above middle-aged, and most intemperate drinker, who might be called *a moving fixture* of this place, after a dinner of pleasure, was brought home dead. Examination on oath could draw forth nothing clear as to the manner of his death. It had probably been immediate, and he had fallen. It certainly happened in the evening, within less time than an hour and half, while travelling in a carriage. In the morning he had felt uncommonly well. Some time after death, the jugular was pierced; at the time and after, it was stated that a quart of blood had issued

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issued. It was the middle of August, and forty hours had elapsed before consent could be obtained to open the body, which however lay in a shaded N. W. room, and was not nearly so putrid as might be expected. There was nothing indeed very offensive till the abdomen was opened. A very diffused black, or livid colour over the left side of the face (as if from a blow or fall); left temporal muscle more tender and discoloured. Scalp and cranium thick, Dura mater as closely agglutinated to the cranium as paper hangings to a wall. If the subject had been trepanned, the dura mater must have been cut through, and could not have been detached, if it had not. (This agglutination, doubtless, from chronic inflammation). *Pia mater* much thickened;—much injected, particularly on the left side, where the bruise was. At the summit of the hemispheres, some effusion of coagulating lymph; substance of the brain very soft; many large bloody points in the cut medulla; about two drachms of bloody lymph in the *left* lateral ventricle, (towards which side the head, during dissection, also inclined) choroid plexus turgid; great redness about the cerebellum; coats of the optic nerves much streaked with blood vessels; lateral sinuses full of blood, and the dura mater descending into the vertebral sheath much injected. Adhesions between the left pleuras; pleura pulmonalis very thick; (a natural structure? the patient had laboured under pneumonic affections;) liver hard, nearly of the colour of some blue clays; stomach and intestines appeared healthy, having undergone little change since death.

I have used and quoted Mr. Charles Bell's engravings, merely because they are much in the hands of medical men. I do not question that he has exhibited what he saw in the objects from which he drew; but I am persuaded that his colouring deviates as widely as an enamelled face from nature. Whoever sees a pia mater equally vascular with his representation may safely swear to great inflammation. This has been assented to by several actual observers. One found by measurement that the diameter of the blood-vessels, as given by Mr. Bell for natural, is greater on his reduced scale, than in some degree of inflammation. Those plates possibly represent vessels, first distended by disease, and afterwards by injection. I shall produce further facts and observations on this subject hereafter.

I conclude for the present with a philological, perhaps, an unimportant remark. In conformity with a custom, originating I believe with a physician in London of vast reputed skill, derived by him probably from an ill-contrived

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trived phrase of Mr. Hunter, and beginning to grow inveterate,* I have formerly called that branch of medical knowledge, to which the above facts belong, *morbid anatamy*. I felt some compunction of conscience at the moment; and I now openly beg pardon of the genius of good taste for my offence. If in medical writings, we are to pay any attention whatever to propriety of language, we must forthwith abandon this clumsy morsel of jargon!

I should, indeed, be glad to find any scholar trying to translate "*the morbid anatomy of some of the most important parts of the human body,*" closely into any civilized dialect; Greek, Latin, French, or English.

Ανατομη νοσουσα.
Anatomia ægrotans.
Anatomie maladive.
Diseased anatomy.

The dextrous hand of Dr. Soemmering could not, I see, mould his stuff at will; so for *krankhafte Zergliederungskunst*, he was obliged to shove in *krankhafter Bau*.

The truly eminent French enquirers write *anatomie pathologique*. One cannot object to the title of Morgagni without being *morbidly* censorious. Nothing can be worse than the term of our own countryman. And for my part, I can find nothing better than *pathological anatomy*. For although I much prefer simple short old English words to long Greek compounds, yet pathological, or that which accounts for disorders, is unquestionably expressive; in *physiological* we have a precedent most strikingly apposite; and I trust we shall all rather submit to two hellenisms than one barbarism.

This is a trifling criticism, and the question seems scarcely to admit of dispute. The merit of the work, to which so objectionable a title stands prefixed, is a deeper and more important question. I have been led long since to consider it seriously; and in the sequel I shall take the liberty of inquiring, whether the authority of the writer ought to be held much more sacred for the thing, than for the word.

Clifton, Sept. 19, 1808.

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* Thus, e. g. we are just favoured with *Essays on the morbid Anatomy of the Human Eye*. They might with the same propriety have been entitled, *Morbid Essays on the Anatomy of the Human Eye*.

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Cases of Diseases of the Generative Organs, and of Stricture in particular;

Treated according to the Method proposed by Mr. Roberton, *Surgeon, Edinburgh, in his Work on Gleet, Leucorrhœa, and obstinate Sores.*

Communicated by Mr. Roberton.

CONSIDERING the deplorable state in which the practice of Medicine as well as Surgery in many points now stands, and the impossibility, according to the present plans, either of understanding the real nature of disease, or the action of medicines on the body, it seemed to me that even an attempt to render these points more satisfactory and more intelligible might be of some service. It appeared to me, that a rational examination of the nature of many diseases of the generative organs in particular, has been too much neglected by medical practitioners. In consequence of this, the practice adopted in such complaints has been very often unsuccessful; and even if the original affection should have been removed, the means employed have frequently given origin to other diseases, of a more unpleasant nature, than even the one for the removal of which such treatment was applied. Of this I have witnessed frequent instances, particularly in cases of the diseases erroneously termed permanent stricture—a name now ridiculously applied to all diseases of these parts. The rules inculcated in many of the publications on these subjects, modern as well as ancient, are fraught with absurdity, and demonstrate at a single glance, the total ignorance of their authors respecting those laws of the animal œconomy with which every medical practitioner ought to be well acquainted, before he prescribes for any disease.

In following many of their rules, and attempting to imitate their too often confused and improbable statements, disappointment, such as happened with myself, must have been by others experienced in a variety of instances. It was the frequent repetition of such disappointments, that first convinced me of the necessity of exercising some little independence of thought in my practice in these diseases, and of only following rules, which would be supported by such reasoning as would of itself be as easily understood, as the rules which it inculcated. Thus influenced, I, some time ago, laid before the public the result

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sult of my practice in some of these diseases; and I am happy in seeing, that the rules, which I then recommended, have been found successful, and repeatedly confirmed by universal consent. Since that time, I have carried my investigations somewhat further, and have found, that the judicious management of somewhat similar rules, is equally applicable to several forms of disease, which I, in common with the public in general, had long considered irremediable.

I neither have, nor do I ever intend to publish opinions from the reports of others. I state nothing but what repeated experience and attentive observation have convinced me of; and if, from the *experience* of others, it can be proved that I have erred, I shall, with the greatest pleasure, listen to such opinions, and most assuredly confess my errror. It is alone by such open, liberal, and candid conduct, that medical science can ever be benefited and improved.

Cases of gleet, of spasmodic stricture, and of debility of the generative organs, are, *in practice*, constantly confounded with each other. In the numerous volumes of those who have written on stricture in the urethra, innumerable instances of this sort are to be found; which, to particularize individually, would be a much easier than a pleasant task. I probably shall, however, at some future period, enter into an examination of the errors of the most popular books on this subject; when, I am of opinion, I shall be able to point out in a clear, and I hope satisfactory manner, many palpable mistakes and evident contradictions even in their own doctrines. *I have no hesitation in saying, that, in the course of such an inquiry into the practice inculcated in the best of these books, I shall point out simple gleet, spasmodic stricture, and debility of these parts, all treated as permanent stricture;* and, although no such disease existed previous to such treatment, shall prove that such a disease, and that too of the very worst kind, was actually induced by it, and which afterwards was, in several instances, found to baffle every attempt to remove it. Thus the wretched patient had often entailed upon him, by the wrong judgement of his surgeon, an incurable disease; and this cruel practice was either persevered in, or he was at length dismissed, with an assurance that, when neither of these existed, he either laboured under *diseased prostrate gland, or thickening in the coats of his bladder,* or something else, which could not be cured. To be reduced to such a state is particularly aggravating, when

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when by more rational, and much less painful treatment, the original disease might have been entirely removed.

I have also no hesitation in asserting, from very extensive opportunities of observation, that *permanent stricture* is, unless when produced by improper treatment, a disease of very rare occurrence; and when it does occur, it must be during inflammation, either from disease, or in consequence of the treatment adopted when the parts undergo the healing process, and may be induced either by inflammation of the urethra from gonorrhœa, a bruise, caustic bougies, or similar applications; never in consequence of gleet, incontinence of urine, &c. &c. which are improperly stated by authors to produce permanent strictures in these parts. Except in the false statements of those who write on strictures, we have no analogy elsewhere in the human body, of parts healing but in a certain state of inflammation; and when that is reduced below a certain degree of action, permanent stricture cannot take place. In this state, however, spasm of the parts is a very common occurrence; indeed, it is only in such a state that spasm in general can take place, at least, to such a degree as to constitute those very obstinate cases of this disease, which we so frequently meet with. Caustic, applied under these circumstances, removes the torpidity of the parts, which with more safety might have been removed by other means. Thus, inflammatory action is produced, and, by a continuance of the same treatment, aided by the strong and often violent spasm, a permanently contractile power of these parts and permanent stricture are at length produced. In many instances, however, by a continuance of these practices, inflammatory action is induced; and by thus removing the morbid action of these parts, they are, perhaps, at length, after much torment, and the utmost danger, *luckily* restored to a tolerable state of soundness.

This is the way, I believe, in which caustic is misapplied, in perhapss at least 70 or 80, probably more, cases in the hundred. In these spasmodic affections, however, which in so many instances, so much resemble permanent strictures, if we either study our own honour, or our patient's comfort, a very different plan of treatment will be adopted. I have very seldom indeed found such cases of a permanent nature, if the following plan be patiently and judiciously persevered in for a longer or shorter time, according to the severity of the complaint.

If, from a proper examination of the patient, which, though

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though much neglected, can and ought at all times to be made, it will be found that such a disease, for the most part, does not exist; but that spasmodic action of the parts is wholly, or for the most part, the cause of the complaint:—then the administration of large doses of antispasmodic medicines must instantly be had recourse to, and continued at least a week, when a blister ought to be applied as nearly opposite the contractile parts of the urethra as possible. The antispasmodic medicines being still continued, the blister must be kept open for several days; and, perhaps, then the warm bath may be an advisable addition to them, when a *simple* bougie, smeared with a mixture of laudanum and oil, of a size proportioned to the severity of the affection, may be introduced into the urethra, and only continued there while it does not irritate or produce pain. Thus the antispasmodic acting on the system in general, while the blister and the warm bath act on the parts particularly affected, with the occasional introduction of the bougie, when it can be done without pain, almost always cure these affections. In some indeed of a more severe nature, I have been obliged, in addition to these, to apply one blister over the sacrum and another over the pubes.

CASE I.

On the 25th of August, 1807, I, for the first time, visited a gentleman, aged 50, who, after having exposed himself to cold and dampness, while in a state of intoxication, was, a few hours after, affected with some difficulty of voiding urine, rapidly increasing in severity.

On the 26th, he became much alarmed, and I ordered for him pills composed of camphor and opium, a scruple of camphor and two grains of opium to be taken daily. On the same evening, he passed urine in a full stream. To prevent constipation from the operation of the medicine, I likewise ordered him to use a laxative pill every night at bed time.

On the 30th, as the opium produced very obstinate constipation, I ordered him to omit it, and take the camphor by itself.

Till the 7th of September, he had no return of his complaint, except early that morning, when he was most violently seized by it. He said, that, on the previous evening, being warm and fatigued, he had drank, very rapidly, about two pints of porter, and, in about two hours after,

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ter, he experienced a difficulty in voiding urine. He, on the same evening, felt as if his urine flowed easily along the urethra, till it came to about half an inch from the orifice, where it stopped; and, immediately after, he felt the most excruciating pain darting along the whole course of the urethra. The spasm was so violent that, without tearing the parts, neither a bougie nor cathether could now be introduced; and as the principal obstruction seemed to be near the external orifice, I ordered, in addition to the camphor pills, a blister to be applied along the under part of the penis, from the scrotum forward, which entirely removed the obstruction, and he again passed urine freely and without pain. He observed, that a draught of cold liquor, particularly if fermented, always brought on an attack of this complaint, and that the camphor pills, with the warm bath, as regularly removed it. His whole system now became very irritable, and the slightest exposure to irregularity in living, brought back the symptoms of his complaint, at least, in a slight degree.

About midnight on the 19th, he was seized with almost complete retention of urine, which caused indescribable uneasiness, and at 7 o'clock of the following morning, when I was sent for, he could not void a drop of urine, and was nearly in a state of delirium. His bladder, however, was not distended; but, from time to time, he felt the greatest inclination to void urine, without the power of passing a drop. His pulse being very full, I took from him two pounds of blood, which exhibited strong marks of an inflammatory diathesis. I likewise ordered him a cathartic, and applied a sinapism to the perineum, and a large blister over his sacrum. In two hours after, his water came away in drops, attended with the most excruciating pain; and in twelve hours from the time I visited him, he had voided two ounces of urine. His pulse still continued full and strong, and I now took from him an additional pound and half of blood; in an hour after, he voided urine with more freedom than he had done for many hours before, though it still was attended with considerable pain.

On the 21st, the blister on the sacrum rose well, and he then voided urine with as much ease as if in perfect health. His pulse, however, was still very full. On this morning, while voiding urine, he made an attempt completely to empty his bladder, and, immediately after this, he experienced a recurrence of the spasm. To prevent this in future,

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ture, I desired him to make no such exertion; and ordered the cathartic to be repeated.

On the morning of the 25th, I found this patient in great agitation of mind from the dread that his complaint was about to resume its former violence. He now felt an almost constant inclination to void urine, which, uniformly, came on almost immediately after a violent passion of the mind on the preceding night, but had nearly gone off again; when, during this night, he had an involuntary emission of semen, and was immediately seized in this way. I desired him to inject some oil into the urethra, and, after taking a cathartic, to recommence the camphor pills as formerly directed. Before the evening of the same day, he voided urine freely, and in a full stream.

On the morning of the 27th, another seminal emission took place, which was immediately followed by a slight attack of spasm.

On the 28th, he followed the same plan as on the 25th, and was again well.

On the 5th of October, I made an attempt to introduce a bougie, but this could not be done without injuring the parts. The attempt was followed by partial spasmodic contractions of the urethra, and slight soreness in it for several days after.

On the 18th, after an attempt to introduce a catheter, which could not be put even within the orifice of the urethra, the spasmodic affection returned. A blister was therefore immediately applied to the perineum, and a cathartic prescribed.

On the 20th, a large sized bougie was introduced as far as two inches, but would pass no further: it occasioned no pain, and was therefore allowed to remain several hours, when it was withdrawn, and the urine flowed in a full stream.

On the 21st, a catheter of a large size was introduced as far as seven inches, and being withdrawn, a large sized bougie was then introduced and allowed to remain a few hours. It occasioned only slight pain at the orifice of the urethra, and, when withdrawn, the urine then also flowed in a full stream. A slight puriform discharge was at the same time observable, and he had a fit of shivering during the night, which greatly alarmed him.

On the 22d, he continued feverish, and could not void a drop of urine; a blister was therefore applied over the pubes, but neither catheter nor bougie could be introduced.

On the 23d, he passed urine in drops, and sometimes in a very

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a very small stream, which was attended with great pain along the urethra; I therefore desired the cathartic to be repeated.

On the 24th, a large bougie was introduced, which stopped at one inch and a half from the orifice of the urethra; that however easily gave way, and it passed without interruption for about six inches, where it was allowed to remain.

On the 25th, on withdrawing the bougie during the night, the urine flowed in a full stream, followed by a slight puriform discharge. It was then again introduced, and it stopped at the same place.

Early on the morning of the 26th, being affected with violent shiverings, he withdrew the bougie: they then soon went off, and he passed urine with ease, and in a full stream.

On the 27th, he himself with the greatest ease introduced the largest bougie for seven inches and a half, and permitted it to remain almost constantly till the following morning, when the shivering fit came on, and he withdrew it. The fit continued for several hours, although he applied warm fomentations, and had an injection with tinct. opii administered per anum.

On the 29th, with only a slight obstruction at two inches, the largest bougie passed easily for seven, but could not be introduced further. A small catgut bougie was, however, passed into the bladder.

On the 31st, every time he withdrew the bougie, (and it was this day introduced to within an inch of the neck of the bladder) the urine flowed in a full stream.

On the 2d of November, he felt sick, and had a slight shivering fit. I however passed a full sized bougie into his bladder, without experieneing any remarkable obstruction. It excited severe pain, particularly about the glans, and when it was withdrawn an hour afterward, the urine flowed freely, and in a full stream.

On the night of the 4th, he slept very little, and did not void urine so freely as the day before. The bougie was not again introduced till the 5th, when it was besmeared with tinct. opii and oil, and passed easily into the bladder without any other obstruction than a little at the orifice of the urethra.

From time to time this spasmodic affection returned, in a slight degree, for about six weeks, but never so severely as to prevent him from having a catheter, or a full sized bougie introduced into the bladder when found necessary.

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It is to be remembered that the camphor, sometimes with opium, was continued during the whole of this case.

He is now, (Sept. 1808) free from every complaint.

CASE II.

July, 1807.—A gentleman, aged 35, of a dark complexion, and very stout, applied to me about two years before this period for the removal of a gleet, which he conceived to depend on permanent stricture of the urethra. In answer to the questions I then put, he informed me, that although the stream of urine was of a full size, it had assumed various irregular shapes, which it never had before he was affected with this complaint; but, that he passed it without any pain or uneasiness. This varied state of the stream of urine gave me reason to believe that no permanent stricture existed in his urethra, and that it was only a spasmodic affection in consequence of gonorrhœa with which he had been frequently troubled.

I did not introduce a bougie to ascertain what seemed so obvious, viz. that there was no permanent stricture present. I therefore prescribed for him the tincture of cantharides, which he used irregularly, having very little hope of being benefited by it. He soon after went to reside in London, and, anxious about the state of his complaints, he assiduously perused every book he could find that treated of strictures in the urethra; and from them having determined to use the caustic, he immediately consulted a surgeon, who judiciously advised him to begin with the daily use of the simple bougie, which was easily introduced into the urethra, and after a few attempts, one of the largest size was passed into the bladder. About two weeks after the daily introduction of the largest bougie into the bladder, the discharge from the urethra increased in quantity, and became somewhat puriform; and, upon pressure being applied, he could feel constrictions in different parts of the urethra, which he never felt before the bougie was introduced. He was now assured by his medical attendant, that the caustic bougie alone could be of service to him, and that from its use he might expect a complete cure. It was accordingly had recourse to. The first application gave him considerable pain, but it completely removed one obstruction, situated about an inch from the external orifice of the urethra. Considerable inflammation of the glans penis, with blueness and swelling of the prepuce followed in a few hours, and the discharge, during the following day, was thick and yellow, and in very great quantity. An eruption then broke out all over

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over his body, and watery blotches and great swelling of his face and head troubled him for several hours. This, with the blueness and swelling, abated in about two days, and the caustic was again applied; but what puzzled the gentleman was the formation of a new stricture, nearly on the same spot where the one existed, previous to the first application of the caustic. This was also destroyed, and the same effects followed as on the former occasion. By the application of the caustic bougie four times a week, for seven months, every obstruction, from the external orifice of the urethra to the bladder, was destroyed; and, all that time, a very great degree of inflammation was preserved in the parts, and consequently a puriform discharge. As new strictures were forming almost as quickly as they could be destroyed by caustic, he imbibed a notion that *he was constitutionally subject to permanent stricture.* At the expiration of seven months the whole course of the urethra was so much contracted, and the penis incurvated to such a degree, that he could not, without the greatest difficulty, introduce the very smallest caustic bougie. This was a source of much unhappiness to him, as he now found, that the introduction of this instrument was absolutely necessary, in order that a passage might be formed for the evacuation of his urine; and, from the great quantity of puriform matter which was discharged immediately after each application of the caustic, he conceived that a collection of pus had for a considerable length of time been daily forming near the neck of the bladder, for the necessary evacuation of which the caustic alone was useful. This ridiculous practice was at length luckily discontinued, and the use of the smallest simple bougie resumed, and in two, or nearly three months more, he observed that the discharge from the urethra had disappeared. Thus was he unintentionally cured of his gleet. As the spasmodic affection of the urethra, however, still continued, I desired him to use, for a short time, camphor and opium in pretty large doses, and afterward to keep the parts gently distended by the simple bougie. He then, for several weeks, adopted this practice, and experienced the greatest benefit from it.

He now says he never shall again use the caustic, as he is convinced it was owing to it that he had suffered so much; but the abettors of this practice assure him that, however much he may have suffered, he must have suffered much had he never used it, and that in expressing his opinions of the caustic bougies, he will only be ridiculed by the world, and can effect no other purpose.

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CASE III.

A gentleman, aged 42, and very stout, was, four years ago, suddenly affected with violent retching, particularly when he coughed, to which he was very subject, or when he suddenly stooped forward. He, at that time, took medicines for the removal of these complaints, and was in a few weeks almost completely cured; but when he indulged in his *bottle*, the retching uniformly recurred, and continued to distress him for several weeks.

I was sent for in December, 1806, to prescribe for a severe, hard, dry cough, with which he had been very much troubled for some time. He had no pain in the chest, and his bowels being costive, I prescribed a cathartic, and ordered him squill pills. I likewise desired him to inhale, from a coffee or tea-pot, the steams of vinegar and warm water every night; but when he attempted to do this, the retching became very troublesome, and he was obliged to desist. Within these few days, he had felt slight pain about an inch from the orifice of the urethra; but as this affection was attended with very little inconvenience, I did not order any medicine for its removal. He had, for some time past, frequently been obliged, from torpidity in his bowels, to take cathartics; and he always observed, that the sensation in the urethra became more painful during the operation of such medicines. After he had continued the use of the squill pills for a week, without any diminution of the severity of his cough, it was deemed necessary to apply a pretty large blister to his breast, which was kept open with ung. epispast.; but even this, along with the squill pills, &c. did not seem to relieve his cough and retching in the smallest degree for more than a fortnight, when both these affections became less violent.

He was, on the evening of the 12th of January, 1807, affected with considerable difficulty in voiding urine, for which, although he applied cloths wet with warm water for several hours to the pubes and perineum, it still continued to increase in severity. At length, however, he became much easier, and slept quietly till toward morning. On examining the urine he had passed during the night, I found it completely coagulated like jelly, and he said that it had the same appearance on the preceding night, previous to his going to bed, which alarmed him greatly. He never had had any venereal complaint.

I prescribed for him pills principally composed of camphor with a small proportion of opium, so that about a scruple

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scruple of the camphor might be taken daily, and ordered a blister to be applied to the perineum.

On the 14th of January, the blister had not remained many hours, when he was much relieved, and voided urine freely and oftener than once during the night, which had not, as formerly, the coagulated appearance. The pain in the urethra had abated, and his other complaints were getting better.

On the 20th, when the gelatinous appearance is not present, his urine deposits a great quantity of brown sediment; but when the urine is gelatinous, it is free from sediment: and when the retching or cough is severe, the pain and difficulty in voiding urine cease, and uniformly becomes more severe when the cough, &c. cease.

On the 27th, he had a slight return of the spasmodic affection; but it went off in a few hours, without his having occasion to use any remedy.

On the 5th of February, in consequence of his complaints in the urethra having returned with considerable violence, he had again been obliged to apply the blister to the perineum, which had again relieved him; but immediately after, the cough and retching, as usual, commenced. Another blister was applied to his thorax, and I desired that both of them might be kept open with epispastic ointment. In ten days after this, the blister in the perineum healed, but that on the breast was kept open.

In May, none of his complaints had troubled him since the last report, and I desired him to allow the blister on his breast to heal. In June, 1808, he had had no return of his complaints, and enjoyed a state of excellent health.

CASE IV.

A gentleman, aged 40, stout, and of a dark complexion, four years ago contracted a gonorrhœa, which was removed by injections, containing acet. plumbi in solution. Soon after the removal of the discharge, he felt great debility of the parts of generation, and very seldom had any inclination to the fair sex. It was not till after two years and a half that he began to recover his wonted vigor, when he again had the misfortune to contract a gonorrhœa: this too was cured by injections, containing acet. plumbi. Immediately after the removal of the discharge, all the symptoms of his former weakness affected him, and he repeatedly observed great quantities of scaly membranous

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substance floating in his urine, unaccompanied, however, by any gleety discharge.

On the 20th of April, 1807, he informed me of the above circumstances, and, in addition to his other complaints, mentioned, that for two months past he had frequently, while in bed, been affected with involuntary emissions of semen. After these occurrences, the stream of his urine was undiminished in size, and I now prescribed for him tinct. cantharid. ℥ß. Aq. font. ℥vi. M. A table spoonful to be taken four times a day.

On the 22d, he observed a drop of blood at the external orifice of the urethra, but experienced no pain or uneasiness from taking the medicine.

On the 24th, the membranous substances formerly mentioned, were not so plentiful as at first. I have therefore desired him to continue the cantharides.

For two months he persevered in the use of that medicine, in sufficient doses to produce slight difficulty in voiding urine. During this time, the seminal emissions gradually became less frequent, and the scaly substances, which he voided with his urine, changed from white to a yellowish colour, but did not diminish in quantity.

As I was obliged to be in London about the end of June, I left instructions with this patient, on whose accuracy I could depend, to continue the tincture in doses similar to what he had been accustomed to, and to use the cold bath thrice a week.

On my return, on the 5th of August, he informed me, that he had continued the cantharides regularly till within the last ten days; and as he had even previously to that period, experienced the most beneficial changes in his health, I declined giving him more of it. The scaly substances had now completely disappeared, and, for the last six weeks, he had only two seminal emissions. I however desired him to continue the sea-bathing while the weather was favourable.

In September, 1808, he had experienced no return of his complaints, and his general health was much better than it had been from the commencement.

CASE V.

January 12, 1807.—A gentleman, aged 28, complained of very great general debility, with acute pain in his loins, occasionally darting down his thighs.

For fourteen years he had been subject to wet dreams, sometimes

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sometimes returning almost every night. He never had, however, any gleety discharge, or any venereal complaint, never having had a connection with any female. His attempts of this kind were attended with such *immediate embarrassments* as must be expected, producing the usual despondency of mind.

These emissions usually occurred during the night, while he was in bed, and were followed by a disagreeable burning heat all over his body, with great anxiety and heaviness, but a complete inability to sleep during the remainder of the night. He, however, passed his urine in a full stream.

I ordered him to substitute for the soft bed, which he had been accustomed to, a hard mattrass, to use few bed clothes, and to sleep in a well ventilated bed chamber. I likewise prescribed nourishing diet, with two or three glasses of wine after dinner, and tinct. cantharid. aq. font. of each ʒij. M. Two tea-spoonsfull to be taken thrice a day in a glass of water.

On the 13th, he was affected with considerable pain and difficulty in voiding urine, I therefore ordered the cantharides to be taken in smaller doses.

On the 16th, he had taken the cantharides in sufficient doses to keep up a slight degree of uneasiness in the urethra, but had nevertheless an emission last night while in bed. I ordered the canth. still to be continued.

On the 20th, he had another emission. These, however, were now less frequent than before the use of the cantharides.

On the 21st, he had another emission, after which, however, the burning heat, &c. over his body, did not trouble him. The cantharides were therefore still continued.

On the 6th of February, he continued to take the canth. in sufficient doses to keep the parts uneasy, and till the morning of this day, had no emission since the 22d ult. and even it was not attended by the disagreeable symptoms above described. The cantharides were therefore still continued.

On the 7th, he had another emission. Since, however, he began to use the cantharides, he had observed that it was not till two or three days after an emission, that the medicine again produced its usual effects on the urinary organs. The emissions, however, were now of rare occurrence, and he felt stronger and in better health than he had done for several years past. The pain in his back had greatly abated. I still ordered the cantharides to be continued.

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On the first of April, emissions, since last report, had occurred about once a week, and he thought they were now most frequent when he happened to take an over dose of the cantharides. I however desired him to use the cold bath twice a week, and to continue the cantharides.

On the 20th, the emissions still continued once a week, but were unattended by the disagreeable sensations which formerly accompanied them. Although his general health was very considerably improved, he began now, from the length of time which had elapsed since he expected relief from the cantharides, to be anxious about his complaints, and almost completely to despair of ever being cured of them. I ordered the canth. still to be continued.

On the 8th of May, the emissions had, for ten days past, been more frequent than usual. I began to suspect that he occasionally recurred to the original cause of his disease, and hinted to him, that with such habits he could never expect to be completely cured. He was rather offended at my suspicions, and positively assured me that I did not do him justice. I thought it right, however, to impress his mind very strongly on the occasion.

I did not see my patient till the first of June, when he again assured me, that my suspicions were erroneous; that he was now much better, having had no return for a fortnight past. This agreeable change however I attributed to my late remonstrance, and ordered the cantharides, &c. to be still continued.

This patient now went to sea bathing quarters, and I did not see him again for nearly three months, when he told me, that his complaints, during that period, had become worse, but he confessed that he had used the cantharides &c. rather irregularly for some time past. I then represented to him the danger attending the long continuance of such complaints, which alarmed him much, and he promised to be very attentive in future; and, by the closest attention to the rules laid down to him, he informed me, about the beginning of November, that his former complaint had returned only about once a month. By the end of the year he had completely recovered, and had even become remarkably stout.

CASE VI.

January 4, 1808.—A gentleman, aged 22, stout made, but considerably emaciated, was about two years ago, (probably from

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from the same cause as in the last case) suddenly affected with a similar inconvenience, sometimes thrice in the course of one night, attended with an uncommon desire to venery. Since the commencement of these emissions, he had been affected with gonorrhœa, which was soon cured by the use of injections. His original complaint, however, did not seem in the least affected by the gonorrhœa, as it continued exactly in the same degree after that disease had left him.

Palpitation of the heart, and almost constant ringing in the ears, had of late troubled him very much. He suffered no pain; his mind however was in the greatest state of despondence, and his existence at length actually became a burden to him. He was at last distressed by the most dreadful dreams, which rendered him melancholy for several days after. They were principally respecting the death of some of his nearest relations; and although he was not at all superstitious, he could not prevent his mind being thus affected by them. What astonished him very much was, that he often dreamed, that he himself was just about to expire in the arms of his relations; and once or twice he actually thought that he had quitted this life. He gradually became very stupid, and unable to apply his mind to any employment, but was quite sensible of being in that state, and for some time past his feelings had become morbidly acute, which, if possible, augmented his affliction.

To these symptoms were added, about a year ago, general weakness with most distressing pains in his back; and, for six months past, he had experienced sudden giddiness and a sort of faintness, during which objects of various colours seemed to float in the air before him; and this was immediately succeeded by perspiration over all his body.

He was, about the time I saw him, frequently affected with cold sweats over his body, coldness in his feet and hands, with a great degree of coldness in his generative organs. For the last three months he had, almost every night, been troubled with very painful erections, but without his former desire for venery, which often kept him awake the whole night. He was now affected with slight tickling cough, with pains in his breast; but his expectoration was not very copious, though of a blackish colour. Every attempt to copulate had, for several months, been instantly attended with an emission, and he had uniformly observed, that if at any time the emissions did not occur

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for a few days, that next time they appeared the semen was greatly increased in quantity to what it was on other occasions, and continued to be so for two or three days.

A celebrated surgeon to whom he applied, recommended strong doses of physic and daily copulation, which he assured this patient would lessen the emissions! I prescribed tinct. cantharid. ℥j. Aq. font. ℥vij. M. A table spoonful to be taken thrice a day, and the doses to be gradually increased.

On the 5th, he experienced great pain in voiding urine, which continued to increase in severity during the day. He therefore left off the medicine, and before night this symptom had abated.

On the 6th, I desired him to take the cantharides as recommended on the 4th.

On the 9th, he had no return of the pain, although he was now taking the cantharides in increased doses. Since he began the use of this medicine, he slept much better than formerly, and had almost constantly felt a strange sort of prickling sensation all over his body. I have ordered the cantharides to be continued.

On the 14th, he had suffered very little pain from the cantharides since last report, and ever since he had began the use of that medicine, he had no emissions. He, however, almost every night, felt as if the emission was just coming on, though it did not. I therefore ordered the cantharides still to be continued, with half a pint of wine per diem, and the liberal use of porter.

On the 16th, he complained that general debility had again recurred, but he had no return of the emissions. I therefore ordered the cantharides, &c. to be continued still.

On the 18th, he accounted for the above symptoms from his having exposed himself to dampness for a considerable number of hours. The cantharides, &c. were still continued.

On the 23d, he had an emision while in bed, but that had not in the least distressed or even roused him from his sleep, as he did not know of it till the morning. His general health was now much improved. The cantharides were still continued.

On the 1st of February, he had no return of the emission, and, from the changes that had taken place in his health, he was in very high spirits. He was now stout and able to walk a number of miles without being fatigued

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which formerly he could not do. The cantharides were still continued.

On the 6th, he had, for two days, suffered very considerable pain from the cantharides, and during the previous night, while in bed, he had two emissions, which depressed his spirits considerably; and on the night of the 7th, he had another.

On the 8th, when he informed me of the above occurrences; he likewise mentioned, that the giddiness and dimness of sight had returned; the pain from the cantharides had however abated, and I therefore desired him to increase the doses.

On the 15th, for several hours the pain from the cantharides had been very severe, and during it he had an emission. He uniformly remarked, that he had, in rapid succession, one or more emissions when the cantharides affected him severely. These emissions, however, were not now accompanied by those troublesome sensations which formerly attended them; and his appearance was much improved having lately become much stouter than usual. Nor was he so apprehensive as formerly, and the general gloomy state of his mind was entirely removed. The cantharides were still continued.

On the 11th of March, he had since last report only one emission, which did not distress him in the slightest degree. He had now become very stout, and was, in every respect, in a state of good health. I however, desired him to continue the cantharides in moderate doses, and to use the cold sea bathing during the summer season.

In September he continued entirely free from his complaints.

CASE VII.

20th of December, 1806, a gentleman, aged 20, apparently stout, was about 6 years ago, while at school, initiated in baneful practices. It was not till after three years continuance in these habits, that he felt the smallest inconvenience arising from them. Then, however he was suddenly affected with frequent involuntary emissions while in bed; but as they proved only troublesome for the moment, he was not in the least degree intimidated by them, and for a year after he continued his habits more frequently than ever. About two years ago these involuntary emissions became more frequent, troubling him

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him four, and often six times every week. These were now followed by cold shiverings, which lasted for an hour or two each time, with complete inability to sleep during the remainder of the night. He was now also affected with frequent cold perspiration all over his body, with coldness of his extremities, with shrinking of his generative organs, and great pain of his stomach; sometimes with a voracious appetite for food, but more frequently a disgust to all victuals for several days; and, on such occasions, if he swallowed any thing but liquid, the sensations he felt in his stomach were not actually painful, but indescribably irksome. From the difficulty too which he felt in being obliged to perform the act of respiration, almost entirely by his voluntary powers, he believed that he should die suddenly while in bed. About that time, he felt an irregular swelling in one of his testicles, and he began for the first time to suspect the real cause of his complaint. To prevent his relations from becoming acquainted with it, he exerted his ingenuity to prevent them from applying for medical assistance. He at first thought that by abstaining from his former practices, which he now resolved to do, he should recover without being obliged to have recourse to any other expedient: but this would not do; for now, in addition to his other distresses, his bowels became obstinately costive, and he could procure no evacuation without the assistance of cathartic medicines. These, with the cold bath, and the internal use of bark and wine, and occasionally of mineral waters, were the only medicines he used till he applied to me in December, 1806.

He assured me that he had nothing to accuse himself of for about two years. His eyes however seemed dull, and he complained of partial blindness, particularly for an hour or two after he had an emission, which happened from four to six times every week. He had no gleety discharge, nor had he ever in any form been affected with a venereal complaint. He complained of an almost constant dull pain in his back, and in his stomach; and an uneasy sensation in the left testicle, which he informed me had swelled considerably for about two years. On examination I found, that this was a very considerable enlargement of the convolutions of the epididymis, and also of the spermatic chord; but as the pain from it was inconsiderable, it gave him no alarm; his bowels were still in a state of great torpidity, so that without the exhibition

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tion of a cathartic he was unable to procure any evacuation; and if he omitted the liberal use of bark and wine, his food, for several hours after taking it, produced the most uneasy sensations in his stomach, and, on such occasions, he had most excruciating pains in his head.

On the 20th of December, I prescribed for him tinct. cantharid. ℥ß. aq. font, ℥vii. M. A table spoonful to be taken four times a day.

On the 23d, I repeated the mixture, and with it the following powder, as, after every dose of the cantharides, pain and uneasiness about his stomach became very troublesome. ℞. Carb. ferri, ℈j. zinzib. alb. ℈j. cort. per. a. ℥j. M. A tea spoonful to be taken thrice a day in a little water or wine.

Before a week had elapsed, he felt slight difficulty in voiding urine, but the pain in his stomach was not nearly so troublesome as before the exhibition of the powder. He remarked that all tonics, particularly of the mineral kind, had uniformly agreed with his stomach, and he thought he had derived partial relief from the internal use of such mineral waters as are to be found in the neighbourhood of this city. Emissions however still continued as formerly. On account of the pains in his stomach, I desired him to take chamomile tea instead of common tea for breakfast, and animal jellies instead of animal food for dinner; with occasionally a laxative pill, composed of equal parts of the extract of hyociamus and aloes. In this way he continued till the end of January, before he was sensible of any change in his complaints; and even then, there was only an abatement of those very distressing sensations which invariably had followed the emissions, but no alteration in the frequency of their returns.

On the 1st of February, the pains in his stomach were, immediately after the use of the tincture, very troublesome; I therefore desired him to omit it entirely, and, in addition to the other articles of diet, to use nearly a pint of port wine per diem, and instead of eating at the stated periods, to take a small quantity of animal jelly, or nourishing soup, every two hours; but never to take either of them in such quantity at once, as to satiate his appetite for food.

On the 25th, having suffered no pain in his stomach for about sixteen or seventeen days, he recommenced the use of the tincture in small doses, and his other articles of food, &c. were continued as formerly, with the addition of

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of the cold bath every morning. By the 12th of April, gradually augmenting the doses, he could take about three drachms per diem of the tincture, which did not occasion any pain in his stomach, but kept up a constant degree of irritation in the urinary organs. The emissions did not now occur oftener than once, sometimes twice a week, and no disagreeable sensation was felt after them when they did occur. His bowels became much more regular than formerly, as he only required one of the laxative pills every two or three days, instead of one every day.

On the 15th of May, he again felt severe pains in his stomach, immediately after taking a dose of the tincture; in consequence of which I desired him to diminish the doses, but the pain being still produced, he was ordered to discontinue the use of the tincture entirely. I remonstrated with him upon the impropriety and even danger of indulging in former practices, but he assured me that he did not, as his anxiety to be relieved of his complaints was very great. I attempted twice or thrice to recommence the use of the tincture, but even the smallest doses produced pain in the stomach; and he now observed that almost immediately after taking a dose he had an emission.

On the 1st of June, I therefore omitted the tincture, and gave him a solution of phosphorus in æther,* with directions to take two drops in a glass of water thrice a day. He once or twice added one drop to the dose more than he was desired to take; but from the disagreeable sensations which he felt in his head, immediately after taking it, he did not in future feel much inclined to deviate from the rules laid down for him; but with the greatest care and attention, continued to increase the doses till the 20th, when he told me that the emissions were now not oftener than once a week. I desired him to continue the solution, gradually increasing the dose.

In October 1807, this gentleman enjoyed much better health than he had done for about three years past; his appetite for food was more regular, and the state of his bowels more natural: his sleep was undisturbed by frightful dreams, and the emissions occurred only once a week, and were unattended by the sensations formerly so distressing to him.

* I have, for some years, been in the habit of prescribing this very active medicine in paralytic affections, and in certain diseases of debility, with very flattering promises of success.

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him. I desired him to continue the medicine a few weeks longer.

On the 3d of June 1808, I was glad to be informed by my patient, that although the swelling of the spermatic chord still continued, yet his health was good, he was capable of exercising all his functions, and seldom had an emission.

CASE VIII.

A gentleman aged 23, when about twelve years of age, fell prematurely into disgusting habits. About six months after the commencement of these practices, he felt very disagreeable sensations about his generative organs. This was not an acute pain, but a sensation as it were of something in the form of liquid constantly trickling about the perinæum and testicles. Soon after this, he experienced great pains shooting along the inside of his thighs, and from time to time, a sharp stinging pain darting along the penis. To these were added incontinence of urine, which, as it was passing, and for a few minutes after, caused a burning sensation with a sense of fullness about the glans penis. At this time he had frequent cold shiverings, with great restlessness during the day, and inability to sleep during the night, in consequence of being troubled by the most frightful dreams, the recollection of which, even while he was awake, terrified him. In this situation he continued two years, when, in addition to the above complaints, he had frequent involuntary seminal emissions. An extensive ulcer too broke out on the penis, which was healed up in a few weeks by simple dressings. His urine at that time became very turbid and extremely fœtid. The night-discharges continued to increase in frequency, and about a year after their commencement, he was affected with severe pains in the back and stomach, which spread to the intestinal canal, and he became very costive. Latterly these sensations had affected every part of his body, rendering even the friction of his wearing apparel painful to him. The great debility he now laboured under was indescribable, and the semen actually run from him on using the slightest motion. He was advised to use sea-bathing, a very common advice with medical men, when complaints are likely to baffle them; but from this he derived no benefit; even while making the exertion necessary in swimming, seminal emissions distressed him, and this was immediately followed by cold shiverings and great debility.

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debility. The glans penis was swelled to an enormous size, and the preputium was pushed behind it. This continued several months, when the swelling began gradually to abate, but the prepuce never returned to its natural situation. This was soon succeeded by a continual perspiration all round the sacrum, and the parts immediately in its neighbourhood; and soon afterwards he experienced most excruciating pains in all the lumbar vertebrae, which were followed by an evident distortion of these bones. General emaciation, to a great degree, soon followed, and inflammation again affected the penis, but much more generally than on the former occasion. It, however, only continued a short time, when it disappeared spontaneously. An intolerably fœtid discharge of a yellowish colour now proceeded from the corona glandis, and he applied to a surgeon, who told him that his disease was venereal, and prescribed for him a course of mercury. From this he derived no advantage, although he continued to use it several weeks. He was then informed by his medical attendant, that his complaint was gravel, and advised to use sea bathing for its removal. His penis and testicles now shrunk very considerably, and were drawn up so close to the under part of his abdomen, as scarcely either to be seen or felt. Soon afterward, however, his testicles and scrotum swelled prodigiously, and ever since that time the convolutions of the epididymus have been enlarged and distinctly felt through the scrotum.

For several years past, most of the above complaints have been stationary. By degrees, however, his mind partook of the general disorder; he became very timorous, and the least alarm threw him into great agitation. He became excessively weak, and quite incapable of following any occupation: and night sweats, with difficulty of breathing, hoarseness, and cough, prevented him from sleeping even when he became drowzy. Great depression of spirits, with languor, dimness of sight, tingling in the ears, and continual horror of mind, had for several years past been gradually added to his other complaints, which, when I first saw him (Nov. 1, 1807) had rendered his life a very great burthen to him.

I prescribed for him twenty drops of the tincture of cantharides, to be taken in a glass of water, four times a day. He gradually increased the dose, and at the end of four weeks, he was taking half an ounce of the tincture daily, when it, for the first time, occasioned him considerable pain in passing water. Being three or four miles distant,

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distant, I did not see him when this sensation was first produced, and, continuing to take the medicine in the same quantity, the pain occasioned was of course very severe. For two or three days, about that time, he passed water involuntarily, and an almost constant profuse perspiration pervaded his whole skin. I desired him to give up the use of the medicine for a few days, to apply warm cloths to the lower part of his belly, and to take a small purgative. In a few days these uneasy symptoms disappeared, and I desired him to recommence the tincture in small doses.

With the usual cautions, which I have elsewhere recommended, he continued to use the tincture, sometimes in larger, sometimes in smaller doses; and by the middle of January 1808, he became much stronger, took his food better, and some of his numerous complaints had entirely disappeared. Even at this cold season of the year, I desired him to use the cold bath, which, in addition to the former prescriptions, he continued to do with the greatest advantage. I desired him likewise to take half a pint of wine every day, and to live on good nourishing diet. Under the properly regulated management of these prescriptions, he recovered from his complaints by slow degrees, and he was, July 1808, stout and active; and but for that general gloom, which his former state of body seems to have entailed upon him, he has no complaint. I have desired him to decrease the doses of the cantharides by slow degrees, and to continue the cold sea-bathing for the remainder of the season.

In September 1808, this patient was not affected with any of the former symptoms of his complaint; the spermatic chord still remained enlarged, and he had occasionally emissions; but even these were so rare as not to constitute disease.

No. 4, *St. James's Street, Edinburgh.*

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

THERE is nothing more destructive of true science, than acquiesence in philosophical conclusions, without reiterated and cool examination; and there is probably, no science, in which there is more of hasty assumption, with-

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out proof, than in that of medicine. To the inexperienced and sanguine, every thing is clear and certain. A patient, employing a remedy new to the prescriber, recovers; immediately the means are announced as specific and infallible. Another is bled in a pleurisy, and dies. The practitioner incontinently inveighs against blood-letting as a vile practice, which ought to be banished from all learned and even civilized society. A third proposes for your immediate solution, questions, which involve half the topics of pathological knowledge; and a fourth pronounces on the principles of medical science, as if it were as easy to fabricate a system, as to make a shoe.

Now it might, at first view, appear of little moment, that men should thus exhibit themselves before the public. What matters it that the farces are damned, and the authors forgotten? There is, however, this evil,—that no folly is without its patron, with talents precisely commensurate to their object; and medical absurdities are never wholly relinquished without much expence of human ease, and human life.

These reflections have often suggested themselves to me, in perusing your Journal; but seldom more forcibly than from various articles in that Number which I have this day received, and more especially from a Dissertation on the Functions of the Liver. This dissertation abounds with queries, to answer which, requires from the author some indirect and positive proofs of the doctrines which he insinuates, in language not sufficiently precise for physiology.

The subject of hydrophobia has of late much and justly occupied the public attention; it is therefore indispensable to relate cases and to propose cures of hydrophobia. One gentleman, in the Number of your Journal before me, describes four animals, which were delirious, and howled and bit, and of which one refused food. But are these sufficient proofs that they were affected with hydrophobia, or dread of swallowing liquids?

Let us examine other points. On the 21st of June, the dog bit master Hill. We are told that he was a fierce creature, whom the child had been accustomed to provoke, and at whom he had snapped once or twice before. At the time in question, he was engaged in a pursuit, in which few animals, whether brute or human, suffer interruption without peevishness. He was following a *proud bitch*; when master Hill coming in his way, all his recollections came at once

across

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across him, and he seized the boy by the heel. But was he hydrophobous? No. "He had never refused food, nor exhibited any symptom of indisposition." Now, the natural business in which the dog was engaged, together with the want of symptoms, where, if they had existed, they must easily have been perceived, afford a high probability that, at this time, he was actually in health; and this probability will not be invalidated by his having been daily in the streets, or by the general opinion, that there were several mad dogs in the neighbourhood, unless it can be proved that these dogs in the neighbourhood were actually mad; and, if they were mad, that they had infected the dog in question.

Two days afterwards, on June 23, the same dog bit a maid-servant, a bitch, and two cats. On the 25th, he alternately howled, and bit, and tore; and now four days had elapsed since he had bitten master Hill, when, unfortunately for the investigation of truth, he was killed. It is, however, of considerable consequence to attend to this interval, because I doubt whether any dog ever lived four days after having begun to be affected with symptoms of the true rabies canina. But to proceed.

On the 2d of July, one of the cats bitten on the 23d of June, seized a girl a little above the ancle, and bit her in four places. The cat was killed, and thus, a second time, the course of the malady was interrupted, and the event concealed. Was this cat hydrophobous? If it was, the progress of disease was somewhat quick: for it was fully established in nine days. This circumstance is strongly against the conclusion, that the disease was the rabies hydrophobica, the period at which that malady appears being rarely so short a time as three weeks, and being more usually six weeks after the bite: besides which, after the first appearance of the symptoms, at least one day commonly elapses before the animal falls upon and bites others. The bitch also sickened about the same time, though with no symptoms of hydrophobia, and died on the 7th of July; and this coincidence of deviation from the common progress of infection, affords, in my mind, a still stronger presumption that the disease was of a different kind from that which the author apprehended.

With regard to treatment, nothing can be more worthy of praise than that which he employed. But the inference is not so certain, viz. "that the fact of preservation is evidently made out." Many a person recovers under the use of remedies, which have no share in effecting the recove-

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ry. The nurse, who watches the patient in typhus, is not preserved from infection by the camphor bag which she wears on her breast; and on this very subject, if the author will only consult the Treatise of the late Dr. James, he will find, among other valuable information, that which I will spare him the trouble of seeking. "I once knew a footman," says this sagacious physician, "belonging to a very near relation of mine, who was three times bit by dogs manifestly mad, insomuch, that several animals bit by the same dog, near the same hour, contracted the distemper and died. This fellow was so obstinate, that he could not be prevailed upon to do the least thing by way of precaution; and yet never had the least tendency to an hydrophobia; so far from it, that he died many years after, in consequence of drinking too much, at an ale-house in Whitechapel, of which he was master." Treatise on Canine Madness, p. 40.

A case of hydrophobia is related by another author. A young man, in a salivation from mercury, had, on the 31st of July, an inflammation of the fauces and uvula, and complained that he had some difficulty of swallowing. Notwithstanding which, he eat his dinners with good appetite, except so far as it was lessened by a depression of spirits. Hitherto, I should presume that there is no evidence of hydrophobia. In the afternoon, however, he had a tickling in his throat; and, after having fainted, he remained for five minutes in a comatose state, from which he was suddenly roused by cold water forcibly thrown in his face. Soon afterwards, the poor young man became vehemently convulsed, suffering globus hystericus, foaming at mouth, and affected with stertorous respiration common in disorders of the epileptic type. The author indeed observes, that "this last symptom is universally attendant on hydrophobia." Should he not have added, "in its very last period?" when, as at the conclusion of various other fatal diseases, a difficulty of respiration may for a short time before dissolution, seem to exceed the diminution of the other vital powers. The patient, after having been thus exhausted by struggles, in which three men were scarcely able to confine him, fell down into a state of coma, from which the author roused him as before by affusion of cold water, only to witness a repetition of similar sufferings.

Such might be the nature and course of hysterical symptoms, approaching to epilepsy, which the author, with a proper diffidence, expressed his suspicions might be hydrophobia; for the word operated as a stimulus equally effectual with

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with the cold water. It roused the patient from his trance, he laughed sardonically, and raved, though without fear, about having been bitten by a dog. A fit of tears however supervened, and with a little subsequent sleep, happily carried off the symptoms, which began and ended within twelve hours.

Whether the patient in this case was unwilling to drink we are not told; but we learn, that after his sleep he drank with great ease and avidity; and, probably, he might feel indignant that a glass of liquor should have been thrown over him.

Let us now attend to the dog Ponto, respecting whom it is of importance to make three inquiries;

1st. Whether Ponto really existed excepting in the patient's imagination?

2dly. Whether the patient was bitten by Ponto? and,

3dly. Whether Ponto was mad?

I turn from this case to one of a graver nature, by an author, whose very errors are respectable. Master Todd, aged 5 years, bitten on the 6th of August by a mad dog in the cheek near the mouth, was seized with a fever on the 9th of September, beginning as the usual remittent, but unsuccessfully treated by bleeding, purging, blisters, and the warm bath, though "the last named remedy appeared to afford him some relief, which he manifested by playing and paddling in the water." "He discovered no dread of water, except in one instance, when he turned from it with horror. He swallowed occasionally about a spoonful of it at a time. Immediately after, he looked pale, and panted for breath. He spoke rapidly and with much difficulty. After speaking, he panted for breath in the same manner that he did after drinking. He coughed and breathed as patients do in the moderate grade of the cynanche trachealis." These symptoms appear to have taken place on the 13th of September, the doctor having seen him only six hours before his death, which happened suddenly, about twelve o'clock in the night of that day.

Let us pause to consider these symptoms. I would ask any experienced medical practitioner, whether they at all resemble what occurs in the true canine hydrophobia; and whether, on the contrary, they are not precisely such as occur in cases of inflammation about the pharynx and larynx? In such cases, speaking and swallowing must unavoidably produce great pain, and at the same time difficulty of respiration. But are difficulty of swallowing, and consequent dread of drinking, of themselves, sufficient to

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characterize hydrophobia? Do we not meet with them in scarlatina? in which the patient dreads the consequences of drinking to such a degree as never to drink at all. In the true hydrophobia canina, not only the act of swallowing, but the touch, the sight, and at length even the name of liquid, produces a kind of convulsive horror. This patient, on the contrary, not only received pleasure from paddling in water, but occasionally swallowed a spoonful of it at a time. His breathing resembled that of patients in the croup; and he died suddenly, probably from a spasmodic stoppage of respiration, as takes place usually in the former disease. His death happened on the 5th day from the commencement of the symptoms; which is from thirty-six to forty-eight hours longer than any one was ever known to live under unambiguous symptoms of the canine hydrophobia.

The having been bitten by a dog affords, as I have before observed, of itself, no presumption of the nature of the disease,* unless the dog was proved to be mad. That that was the case in the instance before us, there is no attempt to shew. And though in such cases, madness were the usual consequence of a bite, it would not follow that every person dying a month after the bite of a rabid animal, died *from* that bite. In order to ascertain the reality of the disease, the symptoms must correspond with those which are usually found to follow similar accidents. Every object must have its *genus proximum* and *differentia*; that is, invariable qualities, not only in which it agrees, but in which it differs from every other object or genus. If, regardless of such a distinction, we consider phænomena merely according to their succession, a man who after having been bitten by a dog happens to be visited by a corn on his toe, may be said to be hydrophobous.

I have shewn the want of these distinctive qualities in the disease before us, which, in reality, the dissection itself proved to be a vehement inflammation in the trachea and other parts adjacent.

If, however, the disease had been actually identified, were the proposed remedy likely to relieve it? Inflamma-

* On account of the importance of the subject, we have admitted these anonymous remarks on authors who have honoured us with their names; yet, in defence of the latter, and for the better information of C. B., we must remark, that Hydrophobia is no necessary symptom of rabies in dogs. We shall be thankful for the further Communications of this ingenious writer; and if he adds his name, shall take fewer liberties with them.

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tion of the throat does not necessarily exist in rabies canina. I have seen a case of that kind, which proved fatal in about sixty-five hours, in which the most accurate dissection shewed no vestige of disease whatever in any part of the membranes, substance or cavities of the brain, fauces, trachea, œsophagus, stomach, intestines, or any other of the thoracic or abdominal vicera. The same thing happens in the tetanus or trismus, in which, in several instances, I have observed the same exemption from all morbid appearances. If the patient no more dies of the affection of the throat in hydrophobia, than of the locked jaw in trismus, precisely the same benefit may be expected from laryngotomy in the former disease, as from the vulgar remedy of wrenching open the jaws or drawing the teeth in the latter. In both cases the constitution may be labouring under desperate and hitherto remediless maladies, of which the difficulty of swallowing and the rigidity of the jaws, may be only local, and, if I may be allowed the expression, unimportant symptoms.

Medical practitioners should suspect their own observations in rabies canina, Non cuivis contingit adire Corinthum. The real malady is so rare, that he would probably be speaking much within bounds who should assert, that a man may have attended 50,000 patients, without having, in his own practice, seen a single case of that formidable diseae.

Should these strictures be acceptable, I may possibly, on some future occassion, again address you; in the meanwhile I am, &c.

C. B.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING had many applications, soliciting information respecting the melancholy cases which have recently occurred in the family of WILLIAM ATTWOOD of this place, print-cutter, and not having leisure to answer them severally, I take the liberty of communicating the particulars to the profession in general, through the medium of your useful publication.

The family consisted of six persons, viz.

William Attwood, aged 45 years; Eliza, his wife, 38.

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Their daughters, viz. Mary, 14; Hannah, 11; Sarah, 7; Eliza, 5.

On Monday the 10th instant, they all ate stewed champignons, at one o'clock, which stew was made in an iron vessel, and consisted of the articles already specified, with the addition of butter and flour, pepper, salt, and water only; and each of the parties, (Hannah excepted) was supposed to have eaten more than half a pint. Within ten minutes after they had eaten their meal, they felt their spirits exhilarated, and the eldest daughter said to her mother, "How funny you look." All the parties continued cheerful till about six o'clock, when having taken their tea, they were attacked with stupor, which was not of long continuance; this was soon succeeded by severe pain in the bowels, accompanied with violent vomiting and copious purging, which continued till the following afternoon, when the parents were alarmed, and requested my attendance.

Under these symptoms, it appeared that the first step necessary to be taken, was to get rid of the poison; for which purpose, oily opening medicines were administered, with the use of emollient glysters, and plentiful dilution with warm broths was recommended.

This method of treatment appeared to promise success in the case of Mary, who had so far recovered on the following day, (Wednesday) that she walked into the village about a quarter of a mile from home; in the evening, however, the symptoms returned; on Thursday evening she became convulsed, and died on Friday morning, at two o'clock.

Hannah only ate two spoonfuls of the stew, as she did not like its flavour; this girl recovered after a severe vomiting and purging.

Eliza did not complain much of her sufferings, but became convulsed at the same time her sister Mary did, and died half an hour after her.

Sarah never complained of pain in the head, but was continually suffering under extreme pain in the bowels, which was increased upon pressure, but no tension existed; glysters afforded her no relief, and she died on Saturday morning, in the same convulsed state as her sisters.

Permission having been obtained to open one of the bodies, that of Sarah was examined, as she had suffered under the most excruciating pain in the bowels, but no appearance of disease was manifest in any of the abdominal viscera; the stomach was empty, and also the whole of the alimentary canal.

On Friday the 14th, the vomiting still continuing in the father

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father and mother, it was thought proper to quiet the irritation of the stomach. For this purpose, small doses of laudanum were administered, but without effect; the effervescing draught was then given, which succeeded, but the pain in the bowels was thereby so much increased, that they both regretted having taken it.

On the same night, Mrs. Attwood miscarried; she was two months advanced in pregnancy; but with her husband, is now in a state of convalescence.

During the progress of this unfortunate occurrence, the pulse in each of the patients was quickened and varied from 100 to 120 strokes in a minute, but it was not sufficiently full to justify the use of the lancet; the tongue was parched and slightly streaked with white; the tunicæ conjunctivæ were not inflamed, and the parties were all perfectly sensible; the urine was secreted in very small quantity, but it was not high coloured.

A dog which had partaken of the stew, died on Wednesday night, apparently in great agonies.

Such, Gentlemen, are the leading circumstances which I have witnessed of the fatal effects of persons having eaten of a particular species of fungus, which they supposed was of the wholesome kind. Were I to attempt to reason thereon, such reasoning, after what I have advanced in the case of Sarah, would prove of the negative kind.

Mr. Wheeler, of St. Bartholomew's Hospital, has procured some of the plants herein described, which he is now examining, and from the extensive Botanical knowledge which this Gentleman is known to possess, the public will probably derive more information upon this subject, than can possibly be expected from the pen of

Your very humble servant,

JOHN PARROTT.

Mitcham, Oct. 22, 1808.

To Mr. Wheeler's kindness we owe the following information. As soon as he was informed of the event, he repaired to the spot where the mushrooms were gathered, and immediately recognized that variety of the Agaricus, which, on a former occasion, nearly proved fatal.* That he might be certain as to the identity of the fungus, he brought another with him to the distressed parents, who assur. d

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* See our Journal, Vol. iii. p. 41.

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assured him that it was not that which formed their stew. He then shewed them that which we have marked as poisonous. This, the father instantly declared to be like those of which they had eaten.

The following is the description taken from Sowerby's Nineteenth Number of English Funguses.

"AGARICUS SEMIGLOBATUS. *With.* 3. *ed. v.* 4. 270.
——————— GLUTINOSUS. *Curt. Lond. fasc.* 3, *t.* 69.

Common almost every where. It is most generally of a hemisphærical form, yet, like other fungi, occasionally varies, and perhaps may furnish a new argument, that those gathered in wet places or bad weather are unwholesome. The varieties 1, 2, and 3, with the pileus acuminated, are most certainly of this description, and nearly proved fatal to a poor family in Piccadilly, London, who were so indiscreet as to stew a quantity (found in St. James's Green Park) for breakfast. See Mr. Everard Brande's account in the Medical and Physical Journal."

We have added a figure of the *Agaricus Pratensis*, commonly called Champignons in England. These are always found growing in a somewhat circular direction, as if tending to what are called fairy rings.

The poisonous species affects something of the same form, but much more imperfectly. But the most striking peculiarity is the *accuminated pileus*, or the sharpness of the summits.

Mr. Wheeler gathered another fungus on the same spot, which he suspects made a part of the ill-fated repast. It rises about an inch and a half from the ground, at right angles. He has not been able as yet to find it described in any work to which he has referred, but promises us every information he can collect on the subject.

CRITICAL

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

The Edinburgh Medical and Surgical Journal, No. XVI.

ARTICLE 1—*On the Poison of Fish.* *By* C. CHISHOLM, M. D.

THIS is a very long article, and it must be admitted that the importance of the subject entitles it to all the space it occupies. Whether Dr. Chisholm is correct in the few satisfactory inferences he seems to draw, we pretend not to determine; but we must allow him merit for as much as he has done, and even as much as he has attempted. The notions of poisons are extremely prevalent among uninformed people, and especially among those who are as well fed as the inhabitants of our West India Islands. We are not here speaking of the negroes. They are not the class who lead the public opinion, nor can they always regulate their own table to their own wishes. But that hunger, which is admitted every where to be the best sauce, is on some occasions the best test concerning poisons appears by the following anecdote, selected from the paper before us.

"When any suspicion is entertained of the wholesomeness of fish, the most usual method practised in all the islands, is to boil a piece of silver, or, very often, when silver is not at hand, an onion, in the same vessel with it. If the fish is wholesome, the colour of the silver, or onion, remains unchanged; if poisonous, they become black. This is generally considered a most certain test of the quality of the fish, and its simplicity would render it the most useful. Experience has been the guide in the choice, and learned men have given their suffrage in favour of it. (Kalm's Travels in N. America, v. i. 386.) But how far we can depend on its infallibility, I shall not pretend to say, although an instance of its fallacy was related to me, by my friend Mr. Stevenson, of St. Eustatius. A Negro, of that island, purchased a barracuda, which his friends, believing to be poisonous, endeavoured to persuade him from eating. He, however, had it boiled, and to ascertain its quality, put a piece of silver into the vessel. The silver became perfectly black; but, not being disposed to lose his money, he still determined to eat the fish; he did so, and found it perfectly wholesome. Another method of detecting the poison, is to throw the heart, or the entrails, to a dog, cat, or duck, before the fish is boiled. If these prove harmless, the fish is of course

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course considered wholesome; on the contrary, if they prove fatal, a test of the most decided certainty is furnished of the existence of poison. But there are tests existing in the fish itself, not unfrequently, by which the poison may be detected. It is a general observation of fishermen and navigators of the channels and narrow seas among the keys or smaller islands, where fish are most abundant, that when fish of any kind, but particularly king-fish (the varieties called bastard and molatoe), Spanish mackarel (scomber cæruleo-argenteus rudus), &c. are destitute of a certain smell peculiar to them, that smell distinguished by the name "fishy smell," they ought to be considered as unwholesome. It is also remarked, by the same class of men, that when these fish are of an uncommon magnitude, they should be rejected as hurtful, or, at least, as less certainly wholesome than those of a more moderate size. The last observation is more particularly applicable to the overgrown king-fish, the barracuda, and bay and gray snapper (species of the coracinus.) In the barracuda, nature seems to be particularly careful to discover its poison by a singular distinction. When this fish is observed to have black or dark-coloured teeth, not a doubt, we are told, should remain of its poisonous property; and it is generally received as a fact, that when any of this kind of fish have proved poisonous, they have been found with black or dark-coloured teeth; and, on the other hand, that there has seldom been an instance of the white-teethed barracuda being unwholesome. Du Tertre, we have seen, has, with a different view, carefully pointed out these marks of poison.

We know not whether our readers will think with us, but we confess that after reading this paragraph, we felt considerably less interest in the whole paper. What better proof have we of the test from fishy smell, increased size, and dark coloured teeth, than from boiling with copper, or onion? Do we not know that in many parts of the old world, mackarel are considered poisonous? Lord Dover, at that time Sir Joseph York, when ambassador at the Hague, first taught the Dutch to eat this fish, which till that time, a nation containing the ablest fishermen in Europe, had rejected with horror, and to which they are scarcely yet reconciled. Among many of the less enlightened Spanish and Portuguese colonists, they are still considered in the same light. Do we not know how numerous were the supposed poisons of the ancients, and that this error was for a number of ages supported by an opinion equally erroneous, of efficacious antidotes; as even to this day we sometimes hear of the efficacy of white-witches, in counteracting the incantations of their infernal sisterhood. The plan proposed in the middle of the transcribed paragraph, is intelligible and rational. We heartily wish the paper had contained more experiments, and fewer traditions. We are, however, ready to admit, that the author has brought a subject before physicians, hitherto too much overlooked by them. We shall therefore give the substance

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substance of his paper, rather to induce others to enquire experimentally, than to trust to Dr. Chisholm's traditionary evidence.

In the island of Grenada, the residence of our author, during part of his official duty, he found on inquiry the poisonous fish to be "the barracuda (perca major subargentea maculata, pinnis nigrantibus of Browne, N. Hist. of Jamaica—the esox barracuda of Sloane, and becune of the French)—a species of snapper (coracinus fuscus major) gray snapper—the porgee (sparus chrysops)—the dolphin (coryphæna cæruleo varie splendens, caudâ bifurca)—the king-fish, tassard of the French, (scomber maximus, pinnulis utrinque novem, tuberculo rigido acuminato utrinque ad caudam)—the conger-eel (muræna major subolivacea)—a variety of the sprat, distinguished by the trivial name "yellow bill'd," not mentioned by Browne, (clupea thryssa, Osbeck's Faunula Sinensis)." All of these, however, are generally wholesome, excepting the last, the poisonous property of which exceeds anything ever yet related, among all the wonders of the venomous art. "The first instance of its fatal effect I met with, was in a negro of the estate of Grand-mal, near St. George's. The poor fellow had scarcely swallowed the fish, when the most dreadful convulsions were produced, and in about half an hour, he was dead. The œsophagus and stomach were in a highly inflamed state, and exhibited the appearances produced by the most active metallic poisons. When the progress of the action of the poison of this fish is less rapid, the course of symptoms is an itching all over the body, violent colicky pains, a contraction and pungent heat of the œsophagus, nausea, heat of skin, and great acceleration of pulse, giddiness, loss of sight, cold sweats, insensibility and death. The distinguishing symptoms are the contraction and pungent heat of the œsophagus. The rapidity of the action of this poison is such, that at St. Eustatius, and other of the Leeward Islands, whites and negroes have been known to expire with the sprats in their mouths still unswallowed. And yet I am informed, that at Porto Rico, the yellow-bill'd sprat is by no means poisonous, but eat with impunity—a curious circumstance, and not to be accounted for, without supposing the local existence of a marine poison of some peculiar kind."

We cannot help wishing that this case had been related more minutely, and still more, that the contents of the negroe's stomach, or other yellow-bill'd sprats of the same haul, had been offered to a dog, or some inferior animal. That we had been informed, whether the animal refused the offer, or received it with reluctance; or if forced into his œsophagus, what the consequences were. We are not surprised at meeting with no chemical analysis of these substances, well knowing how difficult, and often how unsatisfactory it is to conduct them under a tropical sun, at a distance from any apparatus, and without any partner to assist in or witness the effect of our toil.

As by this time the reader must be aware of our meaning, and as

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as to do justice to Dr. Chisholm, he has always acquainted us with the sources of his information, we shall content ourselves with bringing before them in as few words as possible, the contents of his paper.

The gray snapper is said to affect the bowels principally, and sometimes to produce a leprous eruption. "In the year 1786, says he, a carpenter of the name M'Arthur, his two brothers, three or four white journeymen, and some negro carpenters belonging to him, suffered severely by eating of a poisonous gray snapper. The general symptoms were such as I have described; but its mode of acting on one of the negroes is very singular, and affords perhaps an useful hint in the treatment of old ulcers. This man had had an ulcer on one of his legs, which had resisted a variety of means of cure, for more than two years; and at the time I am speaking of, it was so ill-conditioned, that amputation had been proposed as the only means of saving his life. He had eat a larger portion of the fish than his mess-mates, but at first the symptoms were similar. At the end of two days, the discharge from the ulcer became thicker, more abundant, and better coloured; but at the same time, the whole surface of his body became scored, or divided into regular squares, each score deepening into a fossula, out of which was discharged, in astonishing quantities, a substance of a thick curdly texture, and whitish colour. During six weeks, this singular discharge continued: about that period, it gradually ceased, the ulcerated surface healed; and the ulcer on his leg, in a few weeks more, no other means having been used, healed in a most perfect manner. This was literally impressing a new habit on the system, by the introduction of a more powerful and active stimulus. Instances of this do not often occur, and it may be considered as a kind of reproach to physicians, that they are almost always accidental."

We know not how to take our author, in this last dry hit on the whole profession. He cannot mean that the first experiments should be other than accidental, when he considers the subject he has to work upon, and the supposed force of the remedy: but he must be aware, that from the time when Mr. Hunter convinced the world, that the cure of syphilis by mercury could only be by inducing a stronger stimulus than the disease; this doctrine of suspending one diseased action by another, has been not only often discovered by accident, but successfully attempted, and conducted with design.

The porgee, supposed to be the sparus pargos of Foster is said to produce somewhat similar effects, but milder at least in the West India Islands.

The author does not recollect more than two instances in which the dolphin proved poisonous. In these, the disease induced readily yielded to simple remedies.

An instance is related, (we are not certain whether from our author's knowledge) in the year 1791, of a large conger, eaten by

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two overseers, three stout negro men, and a negro child 3 years old, — each suffered in proportion to the quantity he consumed.

A variety of King's fisher, called the bastard, is said to be the most poisonous of this tribe, producing cholera and florid eruptions.

During the author's residence at St. Croix, he made excursions to the adjoining group of Virgin Islands. At these times, he made many inquiries concerning the poisonous fish in those seas. These are the barracuda (perca major); the yellow-billed sprat (clupea thryssa); the poisoned grooper (perca venenosa of Catesby, or trigla subfusca nebulata of Browne); the horse-eye and green-backed cavalloe (varieties, I believe, of the scomber macula nigra ad basin utriusque branchiostegæ et in utraque pinnâ pectorali); Spanish mackarel (scomber cæruleo argenteus nudus, B.); king-fish; the old wife (balistes monoceros); the hyne (coracinus minor); and some varieties of the cancer ruricola. Of these the most dangerous are the barracuda and sprat.

The information from the fishermen was uniform, as is more usually the case when a tale or tradition is repeated, than when no transaction is related by any number of people. All agreed in supposing copper to be the source of the poison; though they consider their feeding on sea moss, (corallina opuntia) during the spawning season as a cause. Might it not be questioned, whether a change in their secretions during this important season, may not render them poisonous for their own protection? By well attested records, it seems certain that the yellow-billed sprats are wholesome on the north-side of the island, and it seems scarcely possible to doubt that they are poisonous in some shoals to which they resort for the propagation of the species. So poisonous, that instances were related of negroes dying in the very act of swallowing the fish. Nay a physician of eminence at Christianstadt, related to our author an instance of a negro, who, informed of his danger, had spit the fish out of his mouth before swallowing any part, yet died in consequence of mastication only. If this were really the cause of the negroe's death, it is impossible to account for it by any cupreous impregnation.

The author next proceeds to the result of his own immediate inquiry, which he admits is less satisfactory.

"The inhabitants of the West India Islands, in their opinion respecting this poison, may be divided into those, 1. Who believe copper to be the basis of it; 2. Those who attribute all its pernicious qualities to the galere or gally-fish (medusæ and holothuriæ), which are supposed to constitute the food of those fish which possess it; and 3. The few who assign the poison to the manchineel apple, and probably as it relates to the varietes of land crab, found poisonous, they are right."

The most prevailing opinion is, that copper is the source of the poison. To discover the source of this metal, our author was at some

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some pains, and we hope his researches will hereafter furnish the mother country or the Islanders with a new source of wealth in this valuable metal.

"The submarine ridge or bank, extending from Grenada to Tobago, called by the fishermen of the former island "Copper Bank," is, I suspect, a vein of the mountain-green, and may be, there are good grounds for believing, an extension of that demonstrated in the leeward Caribbean Sea. Nor is it at all improbable that it might be discovered among the Bahama Islands, were a careful investigation made. The poisonous quality of the fish of the Bahama Seas has been noted and experienced from the days of Catesby to the present. In tracing the tract marked by the presence of poisonous fish, it will be considered a circumstance of at least curious importance, that at Saba, Sombnero, Dog, and Pear, &c. forming a kind of sweeping line nearly N. W. the fish are as poisonous as at St. Eustatius and Sandy point; whilst, to the westward of this line, at St. Thomas, St. John, Tortola, Virgin Gorda, Crab and Passage Islands, and Porto Rico, and to the eastward at St. Martin's, Anguilla, Anegada, they are always perfectly wholesome. St. Bartholomew is, however, an exception, although closely adjoining St. Martin's."

This geographical sketch is carried on much further by Dr. Chisholm; but we shall attend to the arguments in favour of the probability of poison from this source. A British frigate was wrecked on one of the Virgin Islands; oysters grew on her copper bottom, which were eaten not without producing cholera, and excruciating tormina, though in no instance fatal.—The account given by Dr. Blane, of the case of an officer and two seamen poisoned by copper vessels is shown to be similar to the poison from these fish, Fourcroy assures us that oxyds of copper are more virulent than of any other metal, and it is remarked that the muriatic acid in this part of the world, increased by heat, is a powerful solvent of copper. Many other arguments are brought, in confirmation of the probability that this poison is of a cupreous origin.

Dr. Chisholm next considers whether the poison of some fish may arise from the manchineel apple, which is in some places supposed to be their food. After noticing the authority of several French writers, he doubts whether such a cause is sufficient; or whether any but some of the testaceous tribe make it their food. His own observations, as well as those of the inhabitants, and of several writers, would show that the manchineel apple is itself not poisonous. "The solution of the following question says he, may lead to interesting results. If fish are highly susceptible of certain vegetable poisons, why does not the same effect result from the natural application of the poison, which is the result of our present enquiry?" Instances are produced, in which fish are stupefied, or killed by vegetable poisons, yet are afterwards wholesome food. Hence he concludes, that supposing the fish even poisoned by manchineel

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manchineel apple, yet we might expect they might be afterwards eaten with safety.

The opinion which chiefly prevails among the French writers is, that the galere or medusa is the cause of the poison of fish. But this the author proves to be at least problematical, by the number of places in which the medusa is found, but which abound with wholesome fish. It is even doubted by Dr. C. whether the fish medusa itself is as venomous as is generally believed, yet he seems to give more credit to some wonderful traditions concerning it, than his doubts would authorize.

We shall not follow our author through all his remarks and conjectures concerning the probability of an animal being supported by a substance which renders him poisonous when taken as food; nor into an illustration of the same by Gortanner's law of irritability, nor the many other instances of poisons which are produced, many of them, in our opinion, on very uncertain authority. The numbers, as he observes, ought to have been greatly multiplied, but he wishes to confine himself to a few *classical instances*. These kind of references are certainly very interesting, but can we call them satisfactory? What, though the story of Mithridates is related by Justin, and admitted by the modern compilers of the history of Pontus.—What, though Galen admits it also, and believes that a similar habit had been impressed on the Emperor Aurelian by himself.—Are the authorities of those days sufficient to induce a belief of a power, which, if well established, would have been perpetually referred to? Or, is there any greater probability of the story concerning the Sultan of Cambaia than of the Arabian Knight?

Uncertain as we are of the reality of some of these poisons, which the author did not witness himself, we shall be very short on the subject of the cure from the effect of them. Against those which poison by mastication, there can be but little chance of success by any remedy. The principal antidote against the rest is salt. On this, and the rest of the paper, we shall forbear to make any further remarks, only repeating our wishes that the subject may be taken up experimentally by those who have such opportunities.

ARTICLE 2.—*Medical Reports for Nottingham, from March* 1807, *to March* 1808.

THE author, after a few judicious remarks, begins his account with an examination of the epidemic constitution from April 1807 to March 1808.

In April, pulmonary complaints appeared, as are usual at these seasons, but were easily removed; a contagious porrigo, or scaled head appeared, and continued to be very troublesome.

The most remarkable thing in the two subsequent months, is, that rubeola, which was so fatal in London, was attended with little danger, though epidemic, in Northampton. In August, however, it became very serious, and acquired, as the author remarks, a disposition to gangrene. In October, however, it a-

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gain became milder. During the same month typhus was attended with diarrhœa; the principal remedy was cold sponging with vinegar and water, and the exhibition of nitric acid. Wine was found injurious till perspiration appeared.

In November, catarrh took place of measles, and remittent fevers of children were very prevalent. Synochus among grown people. Typhus was for the most part mild, but often required purgatives, and was constantly the worse for astringent remedies, when diarrhœa spontaneously supervened.

In December catarrh was so general, though for the most part mild, as to acquire the name of influenza, yet infants and convalescents from measles and other diseases, fell victims to it. In January the catarrh continued, with pain in the side, which yielded to blisters, but those who were bled recovered very slowly.

The present alarm concerning rabies, induces us to transcribe the following acrount of an epizootic in the canine species.

"Much alarm has been excited within the last two months in this town and neighbourhood by a disease among dogs, said to resemble rabies; several men and children were bit, but no hydrophobia has ensued, although few employed any remedy. Some certainly went to the coast for sea-bathing, which has had the merit of being considered a certain preventive, but experience has too often proved the fallacy of relying on this plan. A boy was admitted into the hospital with a wound on the fleshy part of the thumb from the bite of a dog supposed mad. Caustic was applied to the part, and small doses of calomel exhibited night and morning; the injury had been received more than seven days before he applied for assistance, but no symptom of disease appeared, and the boy has ever since remained in good health. The dog was destroyed as soon as possible, but not before he had bit a pig, which, after the lapse of some days, was killed from a suspicion of madness.

"When the cry of 'mad-dog, mad-dog,' arises, death is the inevitable portion of the animal; and, by the vulgar, it would be considered the highest point of rashness to attempt saving it from immediate destruction; but one instance has occurred, where a man had sufficient firmness to resist the public cry, and to put his dog, which had bit two children, into a place of safety; he eat and drank the same day as usual; this a rabid animal might have done; but he has continued ever since in perfect health; nor have the children, although no means were employed, experienced one unpleasant symptom: had this animal, on the contrary, been destroyed, it would have been added to the list of mad-dogs, and the relations of the children would have remained, at this moment, in a state of suspence.

There certainly has been considerable disease among dogs, attended with different symptoms; some were suddenly attacked with giddiness, turning round several times, run staggering and biting at objects in their way, and then unexpectedly drop down dead;

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dead; and this probably in two or three hours after the first seizure. One looked dull in the eye, and frothed in the mouth; a vomit of tartrit of antimony cleared his stomach and bowels, and removed all disease. These complaints were most prevalent in dogs exposed to the temporary influence of a fire. In the public newspapers, about this time, a circumstance is related of a strange dog entering a coffee-room, on a very cold frosty day, and lying down before the fire, from whence, after sleeping some time, he sprung up, and made repeated attempts to bite those in the room, until destroyed; this might be rabies; but it may, with equal probability, be attributed to frenitis, arising from the sudden alteration of temperature, to which the dog exposed himself.

"In addition to the instances of disease in the dog which have been related, two others occurred in June 1808. A small dog appeared dull for a day, then bit his master in the hand, and ran away. He was cautiously pursued, brought home, and placed in a state of confinement, where, after refusing all food, he died on the second day. The body being opened, the stomach, œsophagus, and intestines, were free from any morbid appearance. The lungs were much inflamed. Caustic was applied to the bitten part soon after the wound had been received; about a week after, the man complained of nausea, and oppression at the præcordia; an emetic was exhibited, and assisted in its operation by warm water, with a few drops of the water of ammonia, since which he has continued in perfect health. The other instance certainly presents a very unfavourable appearance; and, as the reporter paid particular attention to the symptoms which the animal exhibited, he thinks a full detail may be acceptable; and he is the more disposed to this, from the little information which he has been able to procure on this subject from books, or personal inquiires.

"The dog, a terrier, was reported to have been bit by a strange dog, reputed mad, that ran through the town, on the 6th of June, and in its way bit other animals, all of whom were immediately destroyed; but as the report of this dog being injured was not conveyed to the owner, he was allowed his liberty as usual. About 16 days after, he was observed repeatedly quarrelling with a large powerful mastiff, on the same premises, with whom he had always been friendly; this circumstance did not excite any surprise at the time, but was supposed to arise from both dogs being more confined than usual, in compliance with a public order for the confinement of dogs during the prevalence of rabies. On Friday evening, July 1st, he followed his master's daughter and her playmate into the hay field, where, during their play, the little girl fell upon the hay near him; he immediately bit her in the leg; but being naturally a savage animal, and the bite slight, it was attributed to accidental surprise, and no notice taken of the dog, until the next day, when he was observed to look particularly dull in the eye, to hold the mouth wide open, with the lower jaw fallen; a disinclination to food, although he eat a small portion of buttered

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bread. These appearances exciting strong suspicion of rabies, he was immediately chained up in his kennel. On the evening of Saturday July 2d the reporter first saw him, and he will now attempt to give a clear detail of the result.

" The eyes were dull, and almost closed by a yellowish matter; the mouth half open, the lower jaw fallen, and only closed when crouching upon the ground; vapour constantly issuing from the mouth; makes many vain attempts to pass urine and fæces; scratches up the earth with his fore-feet, biting it, and then rolling on it; lies down quietly for a few seconds, then starts up suddenly, and howls in a very unnatural tone; the tail hangs down, ears are erect, does not shew any fear, has not swallowed food since the morning; he appears rational, advances to the person calling him, as far as the chain will permit: water being poured into a bason before him, he rushes towards it, and eagerly laps, but makes no attempts to swallow; takes buttered bread in the mouth, turns it round, and lets it fall out again; keeps the tongue, which is quite black, entirely within the mouth; no flow of saliva, but, on the contrary, the mouth appears parched; makes no attempt to bite the kennel; shews great dislike to be left alone, by horrid howling.

" July 3d—Has howled almost the whole night, has not swallowed food, laps water with the same eagerness as yesterday, has not passed any urine or fæces, has made several ineffectual attempts to vomit, much more restless and impatient, mouth as yesterday, no flow of saliva; gnaws the kennel, bites the chain, or any thing that appears to confine him.

" July 4th—Bites at any object put near him; does not refuse food, and still laps water, but cannot swallow; mouth as before. In the afternoon some castor oil was poured down his throat by a strong man, who, for safety, had fixed his head by a fork, placed over his neck, and forced into the ground at the extremity of his chain; he did not attempt to bite, but became more tractable; swallowed some gruel, vomited much dark-coloured fluid, passed both urine and fæces, became more composed, but was found dead at four the next morning. The body was opened as soon as possible by Mr. Kenney, veterinary surgeon of this town. Much slimy mucus was found under the tongue; the parotid glands greatly enlarged, the uvula and inner coat of the stomach much inflamed, one lung was also inflamed, the stomach contained some dark-coloured fluid, some coagulated blood between the dura mater and pia mater, but no inflammation of the membranes; the vessels of the brain turgid with blood, the jaws free from any bruise or injury, no inflammation of the œsophagus, or intestines, which were quite empty; the bladder was free from disease.

" It yet remains doubtful if the disease of which this animal died be rabies; very little satisfactory detail of the symptoms in the dog is to be met with, and dissections are still more rare. The clearest statement of the disease is from the pen of Mr. Mevnel, whose

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whose opportunities for information on this subject cannot be disputed: he describes a disease called the dumb madness, which bears strong analogy to the one detailed here. Dr. Hamilton of Ipswich has, ten years since, given to the public two volumes on hydrophobia, which contain much valuable matter. The young girl who was bit had caustic applied to the part, and in about six days after was sent to the coast for sea-bathing, where the surgeon extirpated the wounded part with the knife.

"No satisfactory information could be procured from those persons in this neighbourhood who have been brought up to the care of hounds; they all judged by the eye, and were incapable of conveying their information but in a mass of contradiction, from which it is difficult to draw the truth."

In February the catarrh became almost universal, and generally required blood-letting with some freedom. Such was the case, with measles, which now appeared principally among adults. — The account closes with the description of an irregular intermittent in some soldiers who had arrived from a marshy quarter. The disease, as Dr. T. observes, was so universal as to merit a full detail.

"The type was very irregular; six, seven, ten days, or more, elapsed between the paroxysms, which came on irregularly, with very strong rigour, followed by great heat and much sweating; tongue of a lardish white fur, sometimes yellowish appearance; pulse full, hard, and quick; countenance tinged with yellow. The rigour returned with some in the evening, but with others in the morning. Blood drawn exhibited a buffy coat. The patients were all impressed with the idea that the disease was ague. Bark increased the fever, and was, in some cases, followed by violent hæmorrhages from the nostrils. Febrifuge medicines, bleeding, purgatives, all were tried in vain, with the severe cases; some of the slighter were cured under one or other of these plans of treatment. In a few, cold affusion was employed in the hot fit; it shortened the paroxysms considerably, but did not produce any farther alleviation. Arsenic was then given; but as those who took no medicine were gradually recovering, it was omitted, and the troops were marched from this place before the result of all the cases could be known. Although in no one instance did the disease end fatally, yet it is also probable that Nature effected the cure. Home gives an account of a fever among the troops in Germany, which bears a strong resemblance to this disease."

A meteorological table follows, well constructed, and a table of diseases.

ART. 3. — *Cases of Bronchial Polypi, with Introductory Remarks.* By JOHN CHEYNE, M. D.

The author divides bronchial polypi into two species. The first is a mere coagulation of the blood under hæmoptoe. The others, he conceives, are symptomatic of a more chronic disease. "They are," he observes, "preceded by catarrhal complaints.

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and attended with cough, wheezing, and dyspnœa. The fit of coughing which displaces them is sometimes alarmingly violent."

"Bronchial polypi, of the second kind, differ materially from those first described, which were said to be mere coagula, separated from the blood which had been poured into the lungs. Those of the second species are produced by a secreting surface, in a state of inflammation. They are justly held as analogous to the membrane of croup. Yet, the action which produces bronchial polypus never rises to such a height as in croup. This view of the disease leads to the cure. The consideration of this need not detain me; we have only to adopt the general indications laid down for the treatment of inflammations to the disease in question."

We have given the passage in the author's own words, not having the same aptitude at assigning causes for effect.

ART. 4.—*On the Sensibility of the Inflamed Cornea to the Transmission of Light.* By JOHN VETCH, M. D. in charge of the Ophthalmia Depôt, Selsey Barracks.

The ingenious author of this paper begins by remarking, that all the organs of sense under inflammation are on some occasions subject to greater, and in others to less sensibility from this change. This he observes is applicable to the eye in its sensibility to light under inflammation. In the violent stage of the Egyptian Ophthalmia, he remarks the eye was less susceptible of light, but in the milder, the susceptibility amounts almost to an *intolerantia lucis*. The form of the disease may be early discovered. In the more violent the vessels are exceedingly minute, the formation of pus more abundant, and there is an early tendency to tumefaction in the conjunctiva. The chemosis which succeeds is not formed by a plexus of vessels, but by an effusion which may be compared to a ring of coral surrounding the cornea, varying in tinges like that substance. As the deeper parts of the eye become affected, it is rendered less and less sensible of light, a discharge of matter follows, and the swelling of the palpebræ precludes all further inspection.

When the vessels, on the contrary, are larger, more distinct and tortuous, the disease is usually confined to the conjunctiva, from which however it does not readily recede. The vessels, from the beginning, extend over the whole surface, and entrench on the margin of the cornea, which may gradually lose its transparences, and thus prevent the return of future vision.

The paper contains some other very judicious remarks, and concludes with the following hints as to cure.

"In farther illustration of the subject, and without entering into any detail of the treatment, I may add, that the irritability arising from the affection of the cornea, by the encroachment of the *conjunctiva*, is best obviated by a well regulated application of the *argent. nitrat.* as near as possible to the margin which has become affected. The use of this remedy I first derived from Mr. Peach, surgeon to the 2d battalion 52d regiment, who then employed

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employed it for the destruction of vessels in chronic cases of opacity. I have been lately informed by Mr. Draper, surgeon to the 2d battalion 78th regiment, that he employed the same remedy very extensively in Egypt. It is one of much utility in all chronic cases of ophthalmia, and, in most instances, may be substituted with advantage in the room of scarification, which, in the ophthalmia propagated by infection, I have always found strong reason to reprobate."

A Postscript is subjoined, containing some Remarks on Mr. Ware's late Tract. These we shall reserve till that performance comes before us.

ARTICLE 5.—*Journal of the State of the Sick on board one of his Majesty's (line of Battle) Ships, during a Cruize to and from the West Indies, from the 18th of January to the 18th of April 1808.* By J. F. Assistant Surgeon.

ARTICLE 6.—*Observations on Yellow Fever.* By D. J. H. DICKSON, M. D.

WE are glad to find so judicious an author, who has had large practical opportunities, confirm an opinion we have uniformly supported, that the few instances recorded of contagion in yellow fever are to be imputed to typhus occurring in those regions, and assuming the appearance of the endemic fever. In that light our author considers the yellow fever, though attacking strangers in a peculiar manner, till they become habituated to the climate. This induces him to differ from those writers, who support an analogy between this fever and plague, both of which Dr. D. has had an opportunity of seeing.

ARTICLE 7.—*Cases of Gout in Negroes.* By Mr. D. QUARRIER, Surgeon of the Princess Charlotte.

ARTICLE 8.—*Biographical Sketch of* Dr. DARWIN.

THIS, of course, contains little more than the history of Dr. D's studies and publications.

The INQUIRER directs us to the search of the Cause of the Sweating Sickness.

This inquiry was suggested by the last Number of Dr. Willan's "Diseases of the Skin." In our Remarks on that Work, we purposely omitted noticing what appeared not only an unfounded opinion, but unnecessarily introduced in an account of cutaneous diseases. But, if we were dissatisfied with Dr. Willan's solitary hint, we have derived no more satisfaction from the Inquirer's longer Essay.

It is first remarked, in contradiction to Dr. Caius's observation, that the disease could not be confined to the rich, as 980 persons died within a few days in Shrewsbury. There is, however, a material difference between a disease which attacks principally the rich, and one which is chiefly confined to the poor; nor is it possible, that Dr. Caius could have been mistaken in the grand outlines. Another thing is admitted by the Inquirer, contrary to

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Dr. Caius and every medical account that we have seen; namely, that the disease was contagious.

It is unnecessary to take notice of the numerous arguments brought by the Inquirer, to prove that the disease did not arise from damaged corn, as we know not a single circumstance which could be produced to favour such an opinion; but it is very remarkable that it should be questioned, whether typhus fever is not a common attendant on times of scarcity or distress.

Is not the coincidence of λοιμος και λιμος almost coeval with any authentic accounts of history. The inhabitants of the southern metropolis cannot but feel flattered at the value placed on their Institutions; but a regard to truth, and to a just chronicle of events, obliges us to remark, that so little has typhus fever prevailed, as to render it unnecessary to increase the boundaries of the Fever house, which cannot with any safety contain more than half a score patients with their necessary attendants. Far be it from us to undervalue the benevolent designs of the governors, or the industry of the medical officers. Should necessity require larger accommodations, doubtless the same encouragement will be increased; and as we have followed the example of Manchester and Liverpool, so we shall keep pace with them. But it cannot be doubted that we owe our exemption from typhus to the meliorated condition of the labouring class. During the year of scarcity, the price of labour was increased, and that price has not diminished as provisions have become cheaper. During the short interval of peace, our builders reassumed their activity, and the return of war has not materially interrupted them.

We are glad to find among the Articles of Intelligence, that his Majesty has been pleased to double the pension of that meritorious officer Dr. Gilbert Blane, in compensation for his having been deprived of his office of Commissioner to the Sick and Wounded, on the reduction of that board after the peace of Amiens.

Practical Electricity, and Galvanism, containing a Series of Experiments calculated for the Use of those who are desirous of becoming acquainted with that Branch of Science; illustrated with Nine Copper Plates. By JOHN CUTHBERTSON, Philosophical Instrument Maker, and Fellow of the Philosophical Societies of Holland and Utrecht.

NOT only has Galvanism added a new wing to the Electrical battery, but even the Electrical apparatus itself has received considerable alterations within these few years. Its application to medicine has also greatly increased; nor is it possible to say what may be accomplished, when experiments are sufficiently multiplied, to explain the great variety of its effects produced on different subjects.

Nothing can be more judicious than the compilation before us at such a time. The simplicity of the language, the easy induction to the most abstruse parts hitherto discovered in this interesting

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ing science, and the lively illustration by such numerous and well executed plates, render this work a most complete introduction for those, whose distance from the larger towns, or other avocations, prevent their attendance on a regular course of lectures.

Of a work of this kind it is impossible to do much more than announce the plan and general contents. In a preface we are informed, that the author first began to publish in Holland, where electricity was imperfectly known and among very few. His success in rendering the science more popular, induced him to enlarge his work by new experiments, and to add something to the Franklinian Theory. On this we shall transcribe the author's own words, and also add the conclusion of his preface, as descriptive of the object of this work.

"With regard to the theory, which I have advanced in Part 1, it will be found to coincide with that of Franklin; but whether or no it is the true theory I do not pretend to determine. I can only say, that all the experiments with which I am acquainted can be more easily explained by it than by any other.

"I have endeavoured to arrange and methodize the experiments so as to render them easy and pleasing to the young practitioner, in hopes that it will lead fresh admirers into a walk where such wide scenes of interest and amusement are continually unfolding themselves. I shall conclude with observing, that in publishing the present Treatise in my native country I feel considerable diffidence, arising from the consciousness that my language in many parts, from having bee nso long accustomed to speak a foreign tongue, may offend the ear of my reader, However, I will venture to throw myself on his liberality; and in soliciting his indulgence, I farther plead my occupation as an artist, and the various interruptions I must have experienced from that scource, in defence of any other errors which may be perceived."

The contents of the work comprehend all that was known of the science before the discoveries made by Professor Davy, and these are readily understood by those who make themselves acquainted with the laws of Galvanism.

We shall offer a single passage, which we have thought could be most easily selected, to show the general style of the author.

"*To direct a Galvanic Shock, or pass the galvanic fluid through any particular part of the body, for medical purposes.*

"Exp. 199. Suppose a person is to be galvanized through the head; place the patient and trough as is represented in fig. 104: the interstices of the trough being filled with diluted nitrous acid, put one end of each director in the holes at the end of the trough, the other ends being directed to the place where the galvanic fluid is intended to act;—having previously screwed to the ends of the directors two button-like pieces of metal, covered with cloth, which must be well soaked in the same liquid as is used for the trough, hold them to the patient, as is represented in

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in the figure, and press them gently to the part. On the first application the patient will feel a shock, and see a flash of light—if the ends of the directors are not removed the patient will experience no more shocks; but a current of galvanic fluid will run through the head, entering in from that end of the director which is annexed to the zinc end of the trough, and passing out to the copper end, by the other director; this current will be felt, or not, by the patient, according to the size of the trough, or number of plates. If it is desired that the patient should have shocks, one of the directors must only touch the patient by intervals; the other being kept close to the part, each touch will produce a shock. In the above method the power of the whole trough is felt—if it shou d be too severe, screw on to the end of either of the directors the spring clasp c, and instead of fixing it to the end of the trough, slip it on any of the plates, and the shock will be moderated, according to the number of plates included by the directors.

"It is the shock given in different directions, which produces muscular motion in animals, after animation is suspended, from whence it was supposed it might be of use in resuscitation under such circumst nces, &c. This I have tried on two malefactors, but without success.

"The apparatus used for the above purpose, consisted of three troughs combined together, each of which contained forty plates of zinc and copper of about one inch and a quarter square surface. When one of the conductors was applied to the mouth and the other to the ear, the jaws began to quiver, the adjoining muscles were horribly contorted, and the left eye actually opened. (For a farther account of these experiments, *see an Account of Galvanism by John Aldini, printed for Cuthell and Martin, London*, 1803.) In this work the writer says, that the effects produced by galvanism on the human frame are different from those communicated by electrical machines. This he has not proved; it is certain that muscular motion can be produced by common electricity, as powerfully as by galvanism, but not in such quick succession, because when muscular motion is to be produced by common electricity, it must be by discharges, either from coated glass or a very large insulated conductor, which takes some time in charging; more or less depending upon the power of the electrical machine; indeed, there has not yet been made an electrical machine that can throw off so much electric fluid, in a given time, as can be produced by a galvanic trough of only thirty-two pairs of plates. The latter is capable of ignitin; eight inches of iron wire, with the same power as two highly charged jars, and the experiment can be repeated several times by the latter, before the jars can be charged to such a degree, as to produce the same effect once. Galvanism has also the advantage over common electricity, that it can be administered in all circumstances where common electricity can; and in some circumstances, where common electricity cannot; it is therefore very much to be lamented that something has not yet been set on foot, in order to give it a fair trial in cases of suspended animation."

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Report of the Diseases of Edinburgh for September, 1808. By JOHN ROBERTON, Surgeon.

This month commenced with rain, which, though by no means heavy, continued for the most part for the first three or four days. The weather then became variable till about the middle of the month, when we had six or seven days of delightful weather. It again became variable, and in this way the month terminated. Toward the end of it we had some frosty mornings.

The equinoctial gales, as they are called, which are usually pretty severe with us, have not been so violent as on former occasions. These hurricanes are often very dreadful in this part of the world, so much so, that it is with the greatest difficulty that either foot passengers or carriages of any sort can make their way along the streets. During these winds, accidents occur from the frequent falling of pans from the chimney tops, and even chimney tops themselves.

The thermometer, during the whole of the month, stood, for the most part, about 60°; sometimes indeed it was as high as 70°, but that was seldom. The barometer varied considerably during the whole month.

Diarrhœa and cholera, formerly mentioned, have not abated in severity; indeed, in some instances, they have been uncommonly severe, holding at defiance, at least for a considerable time, every remedy that could be thought of for their removal. Among the most fortunate applications, tonics, in conjunction with antispasmodics, seem the most effectual in lessening their severity, and at length in entirely removing these complaints. It is absolutely necessary too, now that the weather, particularly in the evenings, begins to be cold and disagreeable, that great care should be taken, especially by those affected with these disorders, to protect the body against its effects. For this purpose, in this climate, our winter clothing ought not to be too long delayed. Those therefore in the habit of wearing flannel, should now gradually accustom themselves to its use; perhaps, thick cotton cloth, worn next the skin, may answer all the good purposes of the former, and be at all times a much cleaner dress. As the protecting of the feet against dampness has always been considered of the utmost importance, while cork soles, fur lining for the shoes, &c. and socks of various kinds, have been used, a more simple, and in my opinion, a more effectual preventive has been entirely overlooked. I allude to the use of cloth slippers over the stockings. If shoes be worn, these [slippers]

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pers] may be exactly fitted to the foot, and not permitted to extend above the edge of the shoe; if boots be worn, they may be of sufficient length to cover the ancle joint. Thro' this substance no moisture can pass; and even if it should penetrate the shoe or the boot, it cannot reach the stocking immediately covering the foot. This is a habit I strenuously recommend, having witnessed its beneficial effects in numerous instances.

Intermittent fever has lately been more frequent here than we recollect it to have been for many years. The bark having long maintained its superiority in such affections, is of course the most common remedy we have recourse to. Such has been the obstinacy of some of the cases of this disease which have lately occurred amongst us, that we have found it absolutely necessary, to prevent a recurrence of the paroxysm, to continue the bark for a considerable number of days after their disappearance. By inattention to this rule, we have often had the disease protracted for a much longer time than it would otherwise have been. Such a degree of obstinacy in this disease has seldom been met with in this city.

Scarlatina and typhus fever have likewise prevailed, though not with great severity, and least so the former. The latter, indeed, has been various in its effects, according to the part of the city, or the situation of life of the persons affected by it. I have uniformly observed, that all epidemic diseases, when they occur in the immediate neighbourhood of filth or putrefying substances of any sort, are always most destructive to the inhabitants; and in proportion as the people are more cleanly, and further removed from such effluvia, they enjoy better health. The very causes of such complaints indicate the best method of cure, viz. instant removal from such sources of contamination.

The Small-pox and the Measles have again appeared in various parts of this city, and, in some instances, the former of these has been of the confluent kind. Why should the obstinacy and perverseness of individuals *still* be permitted to propagate such a loathsome disease amongst us? Certainly, as I have repeatedly urged, a well regulated internal police of every city and town in our island, would soon extirpate that destructive pest.

Several cases of Dysentery have lately appeared in this city, but the complaint has not been universal.

St. James's Street.

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An Account of Diseases in an Eastern District of London, from September 20, to October 20, 1808.

ACUTE DISEASES.		Hemiplegia	2
Typhus	3	Gonorrhœa Simplex	3
Cholera	7	Leucorrhœa	5
Ephemera	3	Amenorrhœa	3
Icterus	1	Rheumatismus Chronicus	5
Rheumatismus Acutus	2	PUERPERAL DISEASES.	
CHRONIC DISEASES.		Mastodynia	5
Tussis	4	Rhagus Papillæ	2
Tussis cum Dyspnœa	7	Menorrhagia Lochialis	3
Hydrothorax	1	Prolapsus Vaginæ	1
Anasarca	3	Diarrhœa	7
Ascites	2	INFANTILE DISEASES.	
Enterodynia	5	Tabes Mesenterica	2
Diarrhœa	15	Convulsio	1
Hepatitis Chronica	2	Ophthalmia	2
Prolapsus Ani	1	Ophthalmia Purulenta	1
Dyspepsia	5	Aphthæ	4

It may be seen by the preceding list, that different complaints of the bowels have formed a considerable proportion of the diseases of the last few weeks; but there are no circumstances respecting them that are particularly worthy of being recorded.

INTELLIGENCE.

ACCOUNTS have been received from various parts of the flat countries, concerning the unusual prevalence of ague during the last autumn. The disease is said to have been attended with more than common severity, with several anomalous or irregular symptoms, and to have yielded with more difficulty to the general remedies. The Editors have also been informed, that in some of the low grounds which have been drained, fevers have prevailed of a low type, which though rarely fatal, have been extremely tedious.

On any of these subjects they will be thankful to be informed by the gentlemen practising in those districts. They particularly request that such as are too much engaged to arrange their notes in a manner they would wish to meet the public eye, will favour them with as many facts as they can satisfactorily authenticate, which shall be acknowledged in any manner most agreeable to the writers.

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Such as have more leisure, will have the goodness to be as particular as possible on the situation of the country, which is the sphere of their practice, on the usually prevailing diseases, on any changes in the same, which within their memory may have taken place, on any alteration in the cultivation of the soil, on any epizootic diseases, and if any analogy can be discovered between them and epidemics.

On the 7th of this month, a man was taken into Guy's Hospital, under the care of Mr. COOPER, for Popliteal Aneurism; and on the same day, about one o'clock, he was brought into the theatre of that hospital to undergo the operation of tying the femoral artery. Mr. Cooper had scarcely divided the integuments, when the man fainted, and soon after fetching three or four deep inspirations (which were supposed a prelude to his recovery) he expired. Upon the succeeding day the body was opened in the presence of the pupils. Upon puncturing the pericardium, it was found full of coagulated blood, which being weighed, amounted to 16 ounces troy; upon further examination it appeared, that an aneurism of considerable size had been formed in the aorta, just after its origin from the heart. This aneurism had given way during the operation, and of course produced the sudden death of the patient.

The Honourable the Governor of Madras, in council, has resolved that a reward of 6000 star pagodas, or 2000l. shall be paid to any commander of a British vessel, who may import alive at Madras the genuine cochineal insect, the growth of South America. The following description of the species of insect, for which this reward will be paid, and of the mode recommended to be pursued for the accomplishment of this object, is published for general information. There is a distinction in trade of four kinds, viz. Mestique, Compreschane, Tetruschaie, and Sylvester, of which the first is accounted the best and the last the worst The three first derive their names from the situation; the last is found wild, and though perhaps superior to the spurious insect procured in the East Indies, is not considered as a desideratum. If either of the other three kinds above specified could be procured, it is suggested that the live insect may be preserved on the plant, during the voyage to Madras; but as the success of this experiment on a sea voyage must be precarious, every other practicable mode that could be devised, should be attempted for the purpose. The following is understood to be the mode practised by the Spaniards, for preserving the insect, while propagating its species, or depositing its eggs. The insects destined for this purpose, are taken at a proper time of the growth, put into a box well closed, and lined with coarse cloth; in this confinement they deposit their eggs and die. The box is kept close shut till the time of placing the eggs on the nopal. The animalculæ are so minute, as to be scarcely perceptible. They are put on the tree in May or June, and in two months attain to the size of a dog-tick.

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The mode of preserving the insect on the plant, should however also be attempted, especially as there is reason to doubt, whether that on which the Spanish coccus feeds, be the same with the nopal andersoniana.

Mr. GEORGE ATKINS has published a description of an improved hydrometer of his contrivance. It consists of a bulb, a small stem, with a cup on its top to receive weights, and a shank beneath the bulb with a pointed screw, to which is affixed a cup to receive weights or solids, when their specific gravities are to be taken. The instrument is accompanied with an accurate set of grain-weights. The weight of the hydrometer itself is seven hundred grains, and on adding three hundred grains in the upper cup, and immersing it in distilled water, at the temperature of 60° Fahr. it will subside to the middle mark on the stem, and will then consequeutly displace one thousand grains of water. It follows therefore, from this adjustment of the bulk of the instrument, that each grain in the upper cup will represent one-thousandth part of the specific gravity of the water, or one unit in specific gravity, if that of water be taken at one thousand; and one-tenth of a grain one-tenth of unit, which is also the value of each of the small divisions on the stem; and accordingly when the hydrometer is immersed in any liquid until it sinks to the middle point on the stem, the specific gravity of such fluid will be indicated by the sum of the weight of the instrument, and the grains added in the upper cup. To accommodate it to the use of those who are concerned with spirituous liquours and of brewers, the inventor attaches a scale, shewing the relation between specific gravities, and the commercial or technical denomination of per centage with the former, and pounds per barrel with the latter.

A Correspondent, in a letter to the Editors, writes as follows: "The rapidly increasing occurrence of fatal hydrophobia, has justly engaged the attention of many of your correspondents. As medical science is best promoted by an accumulation of well authenticated facts, perhaps you will not deem the following, which I have carefully investigated, unworthy of some mention in your articles of intelligence. — A girl, about three years and a quarter old, was standing on the upper steps of a stair case which descended into a cellar from a court in Rose-street, Soho, her face elevated about a foot above the pavement of the court. A small eur dog ran down the court, and on his return bit the child in a furious manner over both eyes, and, it was believed, would have torn her face in a dreadful manner, if her cries had not brought the neighbours to her assistance. A surgeon was immediately sent for, who treated the wounds in the usual way, not suspecting them to have been inflicted by a rabid animal. In *four weeks* from that time, within a day, about 7 P. M. on a Saturday, the symptoms of violent erethism commenced, and on Monday, at 7 P. M. she died. An invincible repugnance to swallowing any thing, either solid or fluid, continued during the whole 48 hours. Several physicians

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sicians and surgeons saw this case on the Monday, when it was plain that the time of preventing or curing the disease had passed over."

M. V. AURIE, apothecary of Valence, has recently made a number of chemical experiments, on the saccharine matter contained in the stalk of Indian corn. The results deduced from this examination are: 1. That the stalk of Indian corn cannot be employed for the extraction of sugar, because the expence would exceed the profit; since one hundred weight yields only two pounds of saccharine matter. 2. That this saccharine matter constantly retains the consistence of treacle, and is incapable of being crystalized by any known process. 3. That the gummy extract might be employed in medicine, as an attenuant, in consequence of its saponaceous quality.

A capuchin of Vicenza, named JOHN BAPTIST DE SAINT MARTIN, has invented a very useful instrument for ascertaining the quantity of saccharine matter in unfermented wine, and showing how to extract it. This instrument, called an *enometer*, has been examined by the academy of Sciences at Naples, who were satisfied that it fully answered the purposes for which it was intended.

Some time in January, Dr. REID will resume his Lectures on the Theory and Practice of Medicine; in which course the diseases of the mind, and those of the body which are more immediately under mental influence, will be especially considered.

A second edition of Mr. CARMICHAEL's "Essay on the Effects of Carbonate, and other Preparations of Iron upon Cancer, with an Enquiry into the Nature of that Disease," is in the press. This edition is so much enlarged and improved, that it may almost be considered a new work. Among the additions are a great number of cases, a disquisition on the uses of oxide of iron in the blood, and remarks on such diseases as depend on its excess or deficiency, or in any way bear a relation to cancer; with an attempt to answer the Queries of the Medical Society, established in London, for investigating the nature and cure of that complaint.

NEW MEDICAL PUBLICATIONS.

Observations on the Egyptian Ophthalmia, and Ophthalmia Purulenta, as it has appeared in England; by William Thomas, Member of the Royal College of Surgeons, and Assistant Surgeon in the Royal Veteran Battalion, 2s. 6d.

Remarks on the Frequency and Fatality of different Diseases, particularly on the progressive Increase of Consumption, with Observations on the Influence of the Seasons on Mortality; by William Woolcombe, M. D. 8vo. 6s.

An Exposure and Refutation of various Misrepresentations, published by Dr. M'Gregor and Dr. Jackson, in Three Letters to the Commissioners of Military Enquiry, interspersed with Facts and Observations concerning Military Hospitals, and Medical Arrangements for Armies; by E. N. Bancroft, M. D. 4s.

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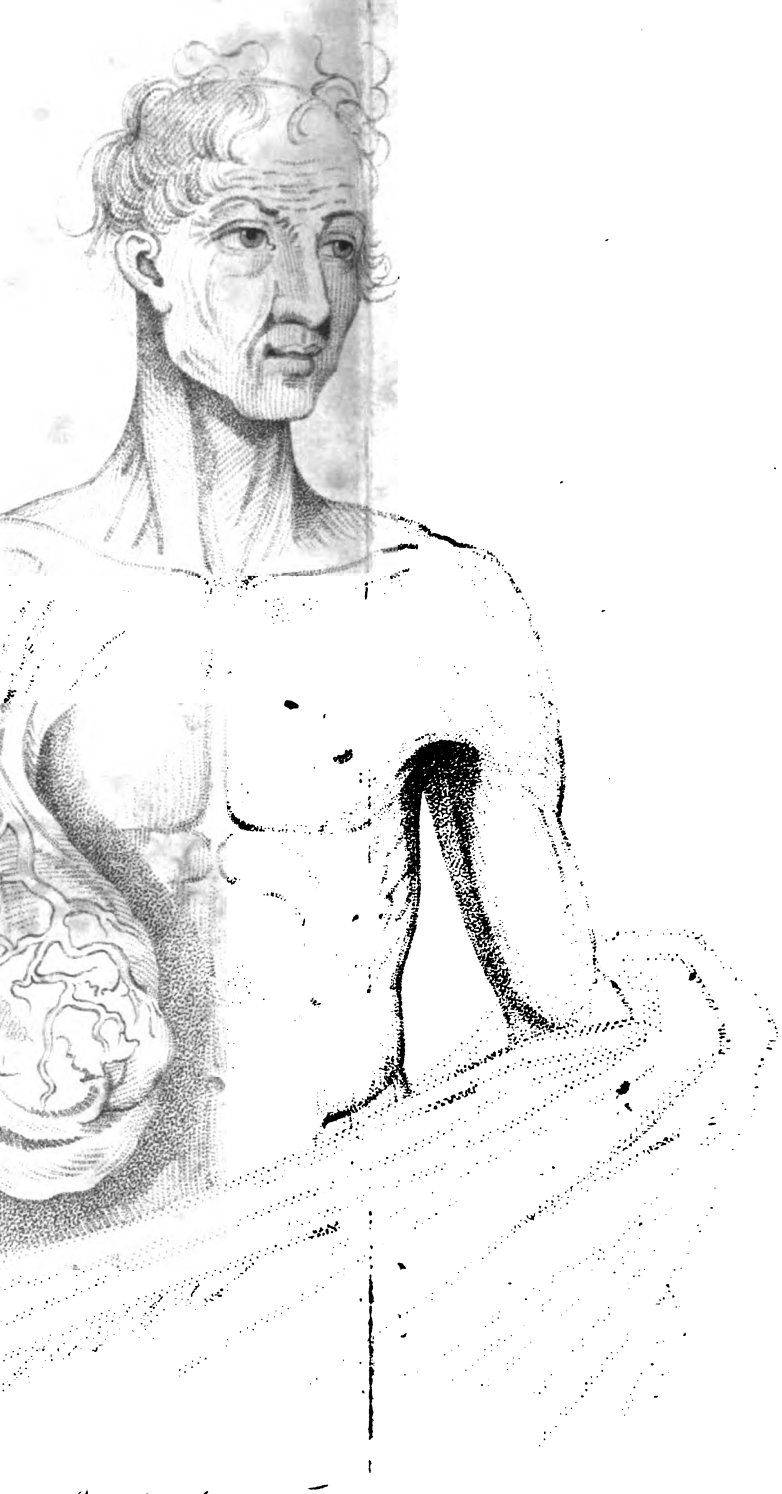

Pendulous Tumour

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THE

Medical and Physical Journal.

VOL. XX.] DECEMBER, 1808. [NO. 118.

Printed for R. PHILLIPS, by W. Thorne, Red Lion Court, Fleet Street, London

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

PERHAPS there are few purposes more useful, or better answered by your Miscellany, than its being made a Register of extraordinary Cases in practice; they are there preserved, like the morbid specimens in an extensive Museum, which, in the possession of individuals, would be quite lost to the public: but, being collected, and placed in a situation where every one can draw from them, they may afford new and useful lights to those whose minds are sufficiently comprehensive and well stored with facts, to enable them to class and arrange these cases into something like systematic order,—the only way, I apprehend, in which they can be rendered extensively useful to science; for, as insulated facts, (though extraordinary cases usually excite much attention) they are perhaps of all others, least useful to a practical Surgeon. Under this impression, I transmit to you the following.

CASE I.

A child, six years of age, died excessively emaciated after an illness of eighteen months. The nature of the disease was never ascertained by those who had attended it. I was only called upon to examine the child after death. The most striking external appearance was the enormous distension of the abdomen, which measured 3 feet in circumference, and gave an obscure sensation of fluctuation to the touch. On dividing the parietes of the abdomen, a vast encysted tumour appeared; its pressure had caused a few slight adhesions to the anterior part of the peritoneum, and the great arch of the colon was displaced, and firmly attached to the front of the tumour. All the abdominal viscera appeared healthy, but rather displaced by the growth of this immense tumour, which

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weighed, when taken from the body, 18 lb. avoirdupoise; its attachment was pretty high up, and to the back part of the abdomen. On examining the viscera individually, I found the left kidney wanting. On tracing the renal artery and veins of the same side, I found them terminate in this tumour; so likewise did the left ureter, which I traced upwards from the bladder. The opposite kidney was rather larger than usual, and very pale.

On removing the tumour from the body, its appearance was as follows. A globular mass contained in a laminated cyst of irregular thickness; that part of the globe which corresponded to the seat of the kidney was rendered irregular by a projection resembling the section of a smaller globe arising from it, about the form and size of half a large orange; above this was another distinct encysted tumour, very slightly connected by cellular membrane, and a few vessels and ligamentous fibres, about the size of a goose egg, and which appeared to answer to the situation of the capsula renales, which was otherwise wanting.

Internal structure.—I first examined the ureter, which was about the natural size, though not quite so large as the opposite one, and appeared impervious in the greater part of its extent; at least, I could not make air pass along it, by inserting a blow-pipe where it terminates in the bladder. I traced it to its termination into what ought to have been the pelvis of the kidney; but here it was lost in the mass of disease, and I could trace no farther distinct appearance. There was at this part no stone or gritty feel, which might have obstructed the passage of urine, &c. The renal artery and vein were not larger than natural, at least not evidently so on comparing them with the right side. I traced them as I had done the ureter, but soon lost them in the diseased mass. The substance of the tumour itself is not easy to describe; its appearance and consistence more resembled half melted tallow, or very soft brain, than any thing I can think of. Here and there small vessels appeared to have been ruptured, which gave a variety to its colour in different parts. There were a few irregular cavities with loose flocculent sides, containing a brownish serum, but nothing of an urinous smell; the quantity in all might be about three pints. The tumour was far from being vascular, and I much doubt whether there was any *new* formation of vessels throughout its structure. Some vessels indeed appeared to enter the mass, but they were clear and distinct, resembling those which pass through the substance of the brain to its membranes;

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membranes; and as I have before observed, the renal artery did not appear enlarged, and was the only vessel which supplied the tumour. Not the smallest vestige of the original structure of the kidney could be traced, for all was one confused chaos of disease. The small encysted tumour, which appeared to answer to the capsular renalis, was in all respects an epitome of the large one.

I could learn but little from the parents of the previous history of the disease. The child did not appear to have suffered much pain; the desire for food was often ravenous; the bowels pretty regular, and the urinary secretion natural.

I do not remember any author who has described a similar disease. In structure, the tumour resembled what Mr. Abernethy has described under the name of Medullary Sarcoma; but differed from this disease in having nothing malignant in its nature, and in not affecting the glands in the course of the absorbents.

CASE II.

Abraham Perry, æt. 73, about forty-two years ago, first perceived a small tumour, situated, according to his description, upon the outer edge of the pectoral muscle, where it forms the margin of the axilla. It was like a little hard gland, without any pain in its substance; but his attention was excited to it by a constant and very troublesome itching over its surface. This tumour increased slowly for about twenty years, and had then acquired the size of a small orange, when it appeared to quit its base, or rather to be elongated from it by a slender peduncle, and gradually became pendulous; in this state it augmented with increased rapidity; the itching subsided, or was only occasional, and less in degree. He never experienced any thing like acute pain, but a sort of dull aching sensation, which might be supposed to arise from the pendulous weight of so large a mass; yet this sensation was rather augmented than lessened when the tumour was suspended by a broad band slung round the neck. However, the pain or inconvenience of any kind which he experienced was so slight, that he usually worked as a husbandman till within a few months of his decease, though at so advanced an age.

The first time I saw the subject of this case was about two months since, when I was sent for on account of an illness arising from some biliary obstruction, which in the end proved fatal. I then obtained the foregoing account,

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to which I shall now add the result of my own examination, and a slight sketch of the tumour, which will convey a sufficiently accurate idea of its form and situation.

The neck or peduncle of the tumour was very small, though being inveloped in a considerable quantity of loose integument, which presented a flattened surface in front, it appears rather large in the drawing. After descending a few inches it suddenly enlarged into an irregular tuberculated mass, presenting to the touch the sensation of variously sized, and irregular formed, portions of bone or cartilage, loosely connected by fat and cellular substance. The integuments were of the natural colour, and extremely loose over the whole body of the tumour, but particularly over its neck, where they might be gathered up into numurous folds. The pulsation of one small artery was perceptible in the neck of the tumour, and a large varicose rim meandered over its surface. Handling gave no pain, and its sensibility was so slight, that although the skin was abraded to some extent at the lower part of the tumour, he had not perceived it till it was pointed out to him. This peculiar hardness, as of portions of bone in the body of the tumour, had only been perceptible within these few years; and Mr. Cribb, a professional gentleman of Stortford, assures me, that when he examined it about seven or eight years ago, its texture was perfectly soft like common adipose sarcoma. The circumference of the peduncle was five inches and three-quarters; of the largest part of the body of the tumour nineteen inches, and its length, from the edge of the pectoral muscle, from whence it appeared to arise, to its lowest extremity, was fourteen inches.

There is a small tumour on his right arm, which, he says, is precisely like what he remembers the large one. It has the feel of a common fatty tumour, and has a very troublesome itching on its surface.

On the 6th of September, 1808, the man died, and a few hours after his decease I proceeded, with my partner Mr. Clarance, to examine the tumour. On making an incision through the integuments, I began where I conceived the tumour to have originated, and continued down to the lowest part of it; I found that it had its rise considerably higher up, and tracing with the knife I found a slight sheath of condensed cellular membrane arising from the clavicle. This sheath arose from the bone by a few shining tendinous fibres, which were soon lost in the cellular substance; it then became gradually thinner and looser in its

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its texture, and over the remaining part of the tumour was nothing more than a very slight condensation of cellular membrane. This sheath of the peduncle contained two, nearly cylindrical, portions of fat, loosely connected, somewhat resembling what Morgagni has described in Adipose Tumours (vide Epist. L. Art. 23, et seq.); they increased a little in size as they descended, and, about six inches from their origin, enlarged suddenly into many irregular and distinct lobes of various sizes; these lobes were loosely connected by cellular membrane, so that they could be easily separated by the fingers; but their chief connection was by distinct flattish white tendinous bands, most accurately resembling a large plexus of nerves, except that they were not separable into distinct fasicula of fibres like nerve. Nothing of this tendinous substance was observed about the peduncle, but the chief great plexus was situated in the middle of the tumour, and sent off a branch, or branches, to each lobe. A few of the branches, as they approached the lobes, became ossified, and in that state entered the body of the lobes, and were accompanied by some very trifling vessels; indeed one small artery, arising from the subclavian, was all that supplied the whole tumour. Some of the lobes were still in an adipose state, like the neck of the tumour; others were of a glandular structure, with numerous small cells, containing an oily fluid, which escaped as soon as they were cut into; others had formed a thin shell or case of hard bone, which contained an unctuous kind of earth, exactly resembling, in colour and consistence, fuller's earth; and in these the tendinous bands above described were ossified before they entered the lobe. The largest of these masses of earth, surrounded by its bony case, I have preserved, and sent to Mr. Abernethy; it weighs about a pound and three-quarters. All the lobes were surrounded by more or less of the original fatty matter of the tumour; the whole mass might weigh perhaps nine or ten pounds.

What appears to me most worthy of remark in the foregoing case, is the *late* deposition of bone, &c. A tumour is formed like most adipose tumours, in the common adipose substance of the body, having a very small supply of blood-vessels, and these vessels, as far as can be judged from the history and appearance of the disease, took upon them the office of secreting fat; but, after a great length of time, they assume a new action, and deposit bone and other earthy matter of an anomalous character.

There appeared nothing of a malignant nature in either

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of the tumours; they neither communicated their actions to the neighbouring parts, nor insinuated disease through the medium of the absorbents.

I am, &c.

H. H. CARWARDINE.

Thaxted, Oct. 10, 1808.

To Dr. BRADLEY.

DEAR SIR,

I Transmit to you the enclosed, which has recently been received from Canton, by Sir George Thomas Staunton, Bart. and which I will beg the favour of you to insert in the Medical and Physical Journal, as I think it cannot but prove interesting to your readers.

I am, &c.

W. G. MATON.

Spring Gardens, Sept. 26, 1808.

IN the 10th Volume of the Medical Journal, I observed, under the head of Medical Intelligence, an article which contained a short account of the introduction of the Vaccine Inoculation into this empire. As this has been deemed by you of sufficient interest to merit insertion, I think it not improbable that a sketch of such farther progress as has been made here in the practice, may be acceptable to some of your readers. On its first introduction, I communicated a detailed account of the success of the experiment to Dr. John Hunter, leaving it to him whether any part of it should be made public. I infer that he has not deemed it of sufficient utility from the consideration that at this period of the discovery, and after so much inquiry and disquisition on the subject from every quarter, my communication could afford no result profitable to science, however gratifying it might be as a piece of intelligence to all who feel an interest in the progress of so singular and beneficial a discovery, more especially to those who have a professional concern in what promises to lessen so materially the sum of human misery.

The article in your Journal which I allude to, gives an abstract of the introduction, which was by means of virus brought on live subjects from Manilla by Mr. Huet, a respectable

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spectable Portuguese merchant of the latter settlement; the practice was favoured by the breaking out of the small-pox soon after in Canton, and the opinion then held as to the most advisable mode of making it known, was to vaccinate as many as possible; not fully aware of the characteristical apathy of the Chinese, and thinking that such a benefit to be appreciated, required only to be known. Several thousands were in the course of twelve months vaccinated, nor have I yet heard an imputation which could bear being traced, against the success of the practice; this is the more extraordinary, as in completion of my views on the subject, I instructed several Chinese as well as I was able, in the mode of conducting it, and they practised it extensively, as well at a distance from my inspection as under it. Whenever the small-pox ceased to be epidemic, the evil and the resource were equally forgotten, and it was with great difficulty that subjects to keep up a supply of the fluid were procurable. At last, in December, 1800, it failed in two at one time; and I found a supply of virus procured from Macao to produce the spurious pustule only; I therefore relinquished the practice for a time, trusting to a fresh supply from India or Manilla. Towards the spring of 1807, the small-pox again made its appearance, not raging so violently as before among the natives, but proving dangerous or fatal to such strangers as were unfortunate enough to be attacked with the disease. I was under the necessity of inoculating five persons with variolous matter; they were adults, but not Chinese, and I trust every due observance was had, both in precaution and treatment, but the disease proved in them all severe and dangerous, and in one case fatal. There was also an opportunity of applying the tests of variolation and exposure, to several who had been vaccinated from one to five years before, without small-pox being produced.

We remained without the vaccine until the month of July, 1807, when it was again brought upon the live subject in a Portuguese ship from Manilla, by the direction of Lieut. Arjaga; and in consequence of his official interference as chief magistrate of Macao, and by his attention, I received a fresh stock, and was enabled to recommence the practice among the Chinese. Since returning to Canton, it has been kept up there, but under an alteration of the plan, as I now do not vaccinate more than ten or twelve at a time, wishing that those who want to be benefited, should be accustomed to apply to their own countrymen, as I feel a perfect conviction, that until the practice gets entirely

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into the hands of the Chinese, it cannot obtain a permanent footing, nor be of any extensive utility in the empire. Unfortunately, their medical men at present conceive it to be their interest to oppose and calumniate it; and until the suffering of the community, and the private interests of some set of men happen to concur in its behalf, I am afraid that the utmost Europeans can do, will be to preserve it for them until that favourable conjuncture arrives; I will not, however, neglect any feasible opening which may occur of spreading it from this city to the country or provinces. Cochin-China is now the only part of the civilized, I had better perhaps say, cultivated and inhabited globe, to which the practice has not been extended; I have before made the attempt to convey it unsuccessfully, but this season it has been sent in different modes, and with due precautions, under the care of two gentlemen, who are equally competent and desirous to do justice to it; they have also several copies of Sir G. Staunton's version of the treatise which is mentioned in the article of your Journal referred to. I might not, perhaps, have sent you an article of intelligence so much in detail, had I not seen in the report of the success of Mr. Balmis, the Spanish physician, in his practice in South America, and in bringing it to Manilla, a very considerable mis-statement of the circumstances of its introduction here by him. The medical men of Macao had followed it there; several hundred Chinese had submitted to it under my inspection, and the above-mentioned treatise had been published and circulated some months I believe before his arrival, at which time the practice was on a footing, to which he could not give either extension or improvement, at least as far as our countrymen were concerned. His, and some prior attempts at Canton, had been unavailing to give the practice currency, until the return of the British factory to that place.

A. PEARSON.

Canton, March 8, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I Have long since intended giving you my sentiments on a subject which has taken up many pages of your Journal, namely, the comparative good effects of the cooling with the

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the stimulating plan of cure in Burns and Scalds. It is certainly the duty of every medical man, to bring forward his practice on this particular point, as the only probable means of settling the matter in dispute. I coincide with several of your correspondents, that if both plans were occasionally made use of in certain cases, it might be attended with some advantage; for instance, where the scalding matter has diffused itself over the eyes, there the cooling means might be preferable, although I have had one case where the whole contents of a saucepan of boiling butter were accidentally dashed in a young woman's face, but being fortunately upon the spot, I immediately applied the ol. terebinth. by means of a brush of feathers, keeping the eye-lids closed for about ten minutes, or a quarter of an hour. I afterwards directed a folded linen rag to be moistened with the same, and kept upon the part until the burning sensation had subsided; the result was favourable, there was only a small vesication upon the neck, which was overlooked, and therefore had not had the advantage of the lotion. Again, as cold water is almost always at hand, plunging the part, if it should be one of the extremities, into it, at least until other means could be procured, is certainly a consideration which ought not to be undervalued.

In the first years of my practice, I pursued the cooling method, but for some considerable time I have made use of the terebinthinate application, and with that pleasing and happy success, that I shall not be readily induced to alter it. In my opinion, which is founded upon the successful issue of a number of cases, the stimulating plan has considerably the advantage, in as much as *permanent* ease is more readily procured than by the application of cold, and the secretion of pus also takes place *sooner*.

These, Gentlemen, are advantages not of little moment; and I do assure you, that since I have had recourse to Dr. Kentish's method, I have not been under one single instance of embarrasment, but on the contrary, have been uniformly charmed with the *immediate* ease produced; and several of my patients, who have had opportunities of trying both methods, voluntarily give it in favour of the new one, and that in terms of the highest eulogy. It is surely unnecessary to add more; what I have stated are facts. Cessation from pain is *almost instantly* produced by the terebinthinate application; but by the cooling treatment, it is necessary *often* to have a *constant renewal* of cold, for hours, before similar effects take place. I have been in the habit of using the ol. terebinth. cold, mixed with ol. lini in the proportion

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proportion of two parts of the former to one of the latter; and from my experience, applying it cold, has been attended with more beneficial effects than hot, although I can readily perceive that in bad cases of burns from metallic substances, where deep eschars are formed, that heating the oil might be attended with more advantage, but I have not yet had opportunities enough in my own practice to establish the fact.

I am, &c.

T. PURTON,
Member of the Royal College of Surgeons in London.

Alcester, Oct. 13, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the vast and gloomy catalogue of diseases, to which the human frame is liable, there is none so replete with terrors, so inconceivably dreadful as that of Puerperal Convulsions; and none that requires nicer management and skill, and more boldness and promptitude in practice. I allude to those cases which occur after delivery, or during the time of actual labour.

That this disease depends upon pressure of the brain from extravasation, or from over-distention of its vessels, producing inflammation, and not from *nervous irritation*, is, I believe, a truth, that requires more generally to be understood.

It is no difficult matter to distinguish a disease from its symptoms when it exists, but it is a knowledge of the causes that must dictate a proper and effectual mode of treatment. Epilepsy is a disease we are all of us familiar with, but we know nothing of its causes, and, consequently, as little of its cure. This, certainly, then, can be an object of no small moment, as it may frequently, if not always, enable us, by timely care and proper management, to arrest a disease in its progress, which, when it occurs, is so fatal in its consequences.

The two following cases, which have lately come under my inspection, may serve to throw some light upon this important subject.

CASE I.

A young woman, aged 19, had a difficult though natural labour of her first child; the pains were violent and protracted,

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tracted, which continued for eight or ten hours, when she was safely delivered by a respectable midwife. In the latter stage of the labour, she complained of pain and giddiness in the head; and as soon as the placenta was expelled, she sunk into a comatose state; and in ten minutes was seized with convulsions. She had three violent paroxysms, succeeded by slight intermissions; and in five minutes after the last, she died with every symptom of apoplexy. In this case, nothing was done, as I only arrived in time to see her expire; which was in about half an hour after she was delivered.

CASE II.

A woman, advanced in years, was safely delivered of her second child, which was many years subsequent to her former. She was in labour for twelve hours, the latter part of which was unusually difficult. She appeared tolerably well, but complained of pain in the head, which gradually increased, and she became delirious; in which state she continued for two hours, and was seized with convulsions. Before I saw her she had had thirteen fits in rapid succession, which left her in a state of complete torpor, and she was to all appearance on the brink of dissolution. Her pulse was scarcely perceptible, and her skin was of a dark or purple colour. From these symptoms, I entertained no hopes of recovery, but ordered her a stimulant draught with æther and laudanum, &c. which seemed to revive her, and a second was given; when her natural colour was gradually restored, and the convulsions returned with the same violence as before. Her pulse now became strong and hard: and a considerable fullness appearing about the head, I took away a pint of blood from the arm, and applied four leeches to each temple: after which, her head was shaved, and a blister applied over the whole. Her bowels being in a costive state, a solution of soft soap was ordered as a glister, and an opening mixture with neutral salts and infus. sennæ. The bleeding having reduced her almost to a state of syncope, she sunk into a comatose sleep, in which she continued for six hours, when she awoke and was for a few minutes quite sensible, but again became delirious, and uttered the most incoherent expressions. As her pulse did not warrant a second bleeding, and the convulsions having entirely subsided, she took draughts every three hours with mixtur. camph. aq. ammon. acet. et vin. antim. which produced a most copious and general perspiration; in which treatment she

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she persisted for two days; during which time she gradually recovered her senses, and is now perfectly recovered.

VERAX.

Derby, Nov. 5, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IT is a melancholy but well-established fact, (says Mr. Roberton, when treating on Cantharides) that the violence of opposition, which any improvement either in surgery or medicine meets with, is too often exactly in proportion to its importance in the removal of a disease. Instances of this kind may be fully exemplified, relative to the internal exhibition of arsenic. That it undermines the constitution, and lays a foundation for mortal diseases is an objection so forcible and universal, that even practitioners who are fully acquainted with its efficacy, cannot but administer it with many anxious apprehensions. I have observed, and heard it frequently remarked, that swellings of a dropsical nature have oftentimes succeeded the use of this oxide. But whether these appearances, whether the glassy eye, the bloated countenance, or the general debility, are in consequence of the arsenic, is, I must confess, a matter of extreme ambiguity. Intermittents, however treated, generally leave some ravages. Indeed it is almost an invariable custom to give tonics after the secession of any kind of fever; and for what? but to remove the excessive weakness, to contract the relaxed and enervated fibre, and give tone and energy to the nearly exhausted circulation. As the stimulating nature of arsenic is irrefragable, and as all stimulants promote absorption, that mercury, and even digitalis, as lately demonstrated by Mr. Saunders, owe their absorbent entirely to their exciting properties, so far then, if we may judge by analogy, from arsenic laying the foundation of a dropsy, it must inevitably tend to remove it. But time and experience undoubtedly will decide. The oppositions advanced, are made by gentlemen of observation and candour, and it is to their further examination of this interesting problem, we must alone look to for certainty and conviction.

Philosophers have asserted, and on the testimony of experiment, that the action or activity of metals depends on the proportion of oxygen with which they are united, and on

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on this principle we may attribute the more immediate influence of the muriat of mercury to the submuriat.

Having about six weeks back, two cases of obstinate intermittents, which resisted the usual means employed, as the bark, canella albe, Fowler's mineral solution, emetics, &c. I resolved upon the trial of the arsenic acid. The acid was made, according to Bucholz's process, by first mixing in a retort, one part of muriatic acid, four parts of the white oxide of arsenic or arsenicus, and twelve parts of nitric acid; then boiling the mixture till nitrous gas ceases to be engaged. After the mass was evaporated to dryness, by exposing it for a few minutes to a lowered heat, I dissolved it, being about 32 grs. in 8 oz. of boiling water. Of this solution, I gave three drops every two hours, combined with either an equal quantity of tincture of opium, or cascarilla bark. The result was particularly successful. The following are facts which at once prove the fallacy of its being injurious, (at least when given in small doses) and at the same time its decided and remarkable efficacy.

Robert Curle, a boy about 14 or 15 years of age, who had lately enjoyed exceeding good health, was attacked in the commencement of September with general rigour, great prostration of strength, and a vomiting of green bilious matter; these symptoms were gradually superseded by the hot stage of fever; the pyrexia was considerable, tongue parched, and skin excessively hot and dry; he took during this stage, a draught with nitre, which was immediately rejected. He then attempted to swallow a beverage he called for, made with apple-juice and water, but the irritability of his stomach continued so great as to refuse every thing taken. During the remission of the paroxysm, he took an emetic, which operated perfectly well; and after his stomach was easier, he began with three drops of Fowler's solution, which were repeated every two hours. The second day following, he was attacked as usual, and the hot fit, if any thing, was more violent. His medicine was continued with the addition of one, and afterwards two drops at a dose. Notwithstanding, the paroxysms came on every other day equally severe for nearly a fortnight, when they remitted for about three days. A relapse ensued, the type, however, was more regular. He then began with three drops of the arsenic acid, which was afterwards increased to four. This dose was taken every two hours. The next day he was again attacked, but with much less severity. Since this time, the fever returned no more, and he is now as hearty and free from disease as ever.

Encouraged

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Encouraged by this success, I next gave it a trial in a case of Rheumatism. The subject's name was Ely, of the parish of Wighton. On her first application, she complained of considerable pain and rigidity of her arm. The tendons at the elbow-joint were very much enlarged, and the muscles of her arm were so contracted, that she could scarcely move it. A strong volatile liniment was ordered, frequent friction with flannel, and the topical application of the warm bath.

On the 7th of Sept. which was about three days after, she was much worse; her arm the same; much pain and inflammation about the ancles; pulse quick; tongue white, and indeed she had now every symptom of acute rheumatism. Leeches were applied to her ancles, the inflamed parts were ordered to be kept constantly wet with a lotion composed of spt. terebinth. et aqua. The sudorific regimen was enjoined.

℞. P. ipecac. comp. gr. vj. Pulv. quaq. quart. hor sumend. P. ipecac. c. gr. viij. Calomel gr. ½. G. a. q. s. ft. bol. h. s. sumend.

As her bowels had been rather relaxed, no aperient was deemed requisite. In a few days the inflammatory symptoms abated, but the pain and tension still continued, and every joint was alternately affected.

℞. Solut. Fowler miner. Tinct. opii aa. ʒij. sumat. gtt. viij. secund. hor.

Sept. 10. Continues much the same as to pain and rigidity of the joints. Rep. gutta also.

℞. P. cort. fl. ʒß. P. canell. alb. gr. v. M. Pulv. sumat. ter in die.

17th. Little amendment, very weak, still much irritability and contraction of the muscles.

℞. Solut. arsenic acid gtt. iij. quoq. bihor.

19th. Better. Rep. gutta.

21st. The arm is reduced to its natural size; her ancles, though painful, are considerably better.

24th. Feels so much recovered, that she complains now only of weakness, which, perhaps, was aggravated by her taking, from some serious mistake, a quantity of white vitriol to the amount of a scruple.

℞. Vin. ferri ʒvj. sumat. cochl. parv. j. ter in die.

The last words which I heard from her, was, that she is very finely.

On the 16th of Sept. George Parker, residing in Wells, complained, "his poor boy, who had got the illness that is about,

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about, wanted some medicine, as he had been sadly with it off and on," as he expressed himself, " for some time."

℞. Antim. tart. gr. j. P. ipecac. gr. v. M. pulv. Stat. sum. Solut. arsenic acid. Tinct. opii aa. ʒj. M. sumat. gtt. v. quaq. secund. hor.

The next day he was again attacked, but with a very transient paroxysm. Though transient, it was his last, and he is now quite well.

A few days after, Geo. P. himself came, and with the same complaint as his son's was. The type of his intermittent was a regular quotidian. His head suffered excruciating pains, and when I saw him, his skin was almost scorched with heat; pulse quick; frequent nausea; dry tongue; and bowels very irregular. I gave him an emetic with a scruple of ipecacuanha, and afterwards ordered eight drops of the compound solution, of equal parts of arsenic acid and tinct. of opium, to be taken every two hours. The day he applied was the 26th of September.

On the 29th, I found he had entirely lost his fever. Being rather of a phthisical habit, and at that time labouring under a troublesome cough, the following pills were prescribed.

℞. Fer. vit. ℈ ij. Pil. scillæ ʒij. P. opii gr. iij. M. et. divid. in pilula xl. Capiet iij. ter in dies.

His health is now perfectly re-established.

On the 18th of October, a man by the name of Lake, of the parish of Holkham, who had been labouring under a tertian intermittent for a considerable time, applied for medical assistance. He had been previously attended by a Mr. R. and taken about thirty-two bark powders, but without deriving the least benefit. On the first day of his application, he began with the arsenic solution without any emetic, *ut* infra præscripta.

℞. Solut. arsenic acid. Tinct. cascarillæ ǽ ʒiij. M. sumat gtt. vj. quaq. dua hor.

On the 22d, the drops were repeated, but he informed me the fever had attacked him only once since he took the medicine. I saw him again on the 26th, and with ineffable joy in his countenance, he told me that he has suffered nothing from his complaint since the time above mentioned. My appetite says he, is improved, and my strength so much recruited, that I feel quite another man. To these might be added, no less than twenty other instances where I have given it without the least injury, but with the most decided advantage. One patient, however, took it to the extent of nine drops, which brought on a great degree of vertigo; but another, (like the first) imagining the larger the dose the sooner

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sooner the cure, took at least sixteen drops at once, and without any bad consequence. To avoid these errors in future, the drops were given in a mixture; and though the latter, a Mrs. Norman, had taken that extraordinary dose without any sensible effect, I found in three days after, the diminished dose of four drops every two hours effected a cure.—Such are the results of an acid, which, I believe, has never till now been ventured internally; if I am wrong in this conclusion, I hope to be forgiven. To calculate on the superior advantages of this solution is useless; what has been said of the white oxide, may be said of this acid, only that the latter is a more active preparation. The value of a medicine is generally in proportion to the simplicity of its form. Though the bark may cure when taken in sufficient quantity, any intermittent; yet, the disgust which it creates, the nausea which it excites, and the neglect of it which consequently ensues; two-thirds of the sick, rather than take it, will leave themselves a prey to their disorder, trusting to the chances of Fortune, or the auspices of their Creator.

When we consider the importance of man, either in public or domestic life, when we see a parent surrounded by a herd of children, craving for bread, and he himself incapable of providing it, the practitioner, (or in truer words the empiric,) who leaves him, who deserts him, because the poor invalid cannot swallow his favourite drug, ought to be branded with infamy, and hated as an unfeeling barbarian. As such, Gentlemen, I consider every improvement, either in the formula of medicines, or in the substitution of agreeable and more concentrated remedies for the complicated and more disgusting, of essential advantage to mankind, I therefore submit the above, with every degree of diffidence and respect, from

Yours, &c.

JOHN DUNN.

Wells, Norfolk, Oct. 27, 1808.

P. S. It is needless, perhaps, to add, that particular attention should be paid in the degree of heat made use of, during the evaporation of the acid to dryness.

Observations

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Observations on the Irritability of Vegetables, with an Account of some Experiments made by M. HUBERT, *to determine the Heat evolved by the Arum Cordifolium during the Process of Fecundation. By Dr.* HALL.

THE capacity which animal bodies possess of being excited into action by the application of stimuli, has, it is well known, been denominated by philosophers the principle of excitability, or as others chuse to term it, irritability. Numerous experiments incontestibly demonstrate that vegetables, like animals, are endowed with a similar principle, on which depend not only the absorbing power and the ascent of the sap, but also the motion or circulation of the juices in their vessels. It is beyond a doubt, that fluids are absorbed and propelled by vegetables, so long as their vitality remains, and that, as soon as this principle is destroyed, the circulation immediately ceases. It also appears, that irritability exists more particularly in some parts of vegetables than in others, and that it likewise varies under different circumstances, and at different periods of their growth. This property, which is peculiar to both animal and vegetable bodies, had long attracted the attention of physiologists, and various hypotheses were at different times invented to explain it. But it was not till towards the end of the eighteenth century, when the invention of thermometers enabled them accurately to measure the heat of bodies, that any precise knowledge was obtained on this subject.

As your Journal embraces not only medical but physical subjects, I flatter myself that the following account of some curious and important experiments, made by M. Hubert, an intelligent naturalist in the Isle of France, and the celebrated traveller M. St. Vincent, respecting the heat evolved by some plants during the process of fecundation, cannot fail to prove highly acceptable to every one interested in the investigation of the laws and operations of Nature, and in tracing the analogy that subsists between the two great classes of organized bodies.

The *arum*, which was made the subject of these experiments, is a native of Madagascar, and of some other African Islands. It is a new species, termed by M. St. Vincent *arum cordifolium*, and of which he gives the following description. *Arum cordifolium caulescens, rectum, foliis ovato-cordatis, subundulatis, basi emarginatis.* Its flowers exhale a very strong odour, which far from being disa-

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greeable, like that of its congeneric species, is on the contrary rather pleasant.

The root of this plant is very thick, and penetrates deep into the soil. Its stem is strong, upright, and about four or five inches in diameter. The leaves are disposed in the form of a ridge, and fall off successively as they become old, leaving the mark of their petioles on the stem: they are cordate, oval, of a fine green colour, slightly undulated, very broad, and frequently a foot and a half in length; their nerves are pale and distinct, their petioles or foot-stalks are very long, round towards their upper extremity very broad, and deeply furrowed at their insertion, where they are semi-amplexicaul, and transparent at their edges. The flowers, which are upright, and supported on short pedicels, issue from their bases. The spathe is greenish externally, and yellowish within, as well as the rest of the organs of fructification. The *arum cordifolium* differs from the *arum arborcum*, to which it bears some resemblance in the stem, which is thicker, and not so branchy; in the colour of its leaves, which are not of so deep a green, and in their form, which are not sagittate or arrow-shaped; in its spadix, which is not reticulated; and in the base of its spathe, which is not of a deep red. It likewise differs from the *arum seguinum*, L. by its larger dimensions; by the leaves, which are emarginate or notched at the base, and finally, because it is not furnished with a nectary.

M. Hubert having observed, that the flowers of the *arum* yielded a stronger heat about sun-rise than at any other period, tied five spadices, which had been evolved during the night, round a thermometer. This number was necessary to cover the whole tube of the instrument. At sun-rise, the thermometer of comparison stood at 19°; it remained the same at six o'clock, while that of the experiment rose to 44°. At eight o'clock in the morning, the thermometer of comparison was at 21°; that of the experiment had fallen to 42°, and the heat of the spadices diminishing continually, at nine o'clock at night it was no more than 28°, while the first remained at 21°.

The next day, at nine in morning, the thermometer of experiment followed the ordinary course. M. Hubert repeated these trials several times, with nearly the same results. The mercury rose to 45°, when he surrounded it with very fine large spadices, but only reached 42° when he employed very small ones.

He succeeded in disposing twelve flowers of the *arum* round

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round the thermometer before the rising of the sun. The *maximum* of the heat was 49 ½°.

This indefatigable naturalist next divided five spadices longitudinally, and applied them against the thermometer in the direction of their sections. The *maximum* of the heat was 42°. This experiment, several times repeated, having led M. Hubert to suppose that the medulla, or pith of the spadices also gave out heat, he contrived to obtain that of a spadix, after having cut it at two inches from its point, by means of a small tin tube four lines in diameter, in order to plunge into it the elongated bulb of a thermometer. Twenty minutes after sun-rise, the mercury was at 39° which was the *maximum* of the heat; the thermometer of comparison stood at 17°. The heat of the mutilated spadix, observed the same periods as that of the most healthy spadices; it began to diminish at seven o'clock in the morning, and finished in the following night. He frequently repeated this experiment; and according to the size of the spadices, and the greater or less mutilation they had undergone in losing their medulla, he obtained 36, 37, or 38 degrees of heat.

The experiments above related were repeated alternately in a dry room, and under the shade of thick and humid trees, without the difference of the place occasioning any sensible variation in the results.

Having hitherto made his trials with the cut spadices, he next determined to repeat them on the plant itself. Having with this view placed his thermometer in a spathe, before sun-rise he obtained 38°, but sometimes only 36 or 37; the heat always ceased on the following night.

After having cut the extremities from six spadices, he tied the male parts alone round the thermometer. The *maximum* was but 41°; the moment of this *maximum* occurred about half an hour after sun-rise. The heat continued much longer; for the next morning, about day-break, the thermometer stood at 30°, and at nine o'clock at night it marked 24°, when that of comparison was at 18° only.

Six female parts of the flowers of the *arum* raised the thermometer to 28°, frequently even to 30°. He took care to make the thermometer touch the *ovaria*, and to deprive them of that part of the spathe which incloses them, the upper part of which withers, and falls off a few days after the heat has taken place.

Having reflected, that the heat which he conceived he had observed in the medulla of the spadices, might probably have only arisen from their exterior surface, in or-

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der to ascertain this circumstance, M. Hubert made the following experiments.

With a very sharp knife he removed all the surface of four padices, without touching the medulla. He then fastened these four medullæ round a thermometer, which at sun-rise stood at 17°. During twenty-four hours, no sign of heat appeared, and the uncovered spadices withered towards the middle of the day. At the same time that he made this experiment with the medulla of the four spadices, he surrounded the bulb of another thermometer with the surfaces of these spadices, the heat of which raised the mercury to 39°. This experiment, which was several times repeated, convinced him that this singular faculty is developed in the exterior surface of the spadices, and within the thickness of one line at most.

According to M. Hubert, there is reason to believe, that the heat indicated by the thermometer would have been greater, if the spadices could have been brought into contact with every part of the bulb, or of the tube of the instrument.

The following are some other experiments on the heat of the flowers of the *arum:* the spathe tied against the spadix during the fecundating process, withered as if it had been steeped in warm water.

Three spadices when evolving heat, having been placed in a caper-bottle, it soon became dim; in half an hour its inner surface was covered with drops of water; in an hour more there was an inch at the bottom of the bottle. He obtained a cubic inch of it in twenty-four hours. This water, which was without colour, and almost inodorous, dissolved soap very readily.

In the evening he cut five spadices, the spathes of which shewed that they would open during the night; and after having fastened them round a thermometer, exactly as in his first experiment, he put their pedicels into water. At ten o'clock at night, the thermometer of experiment was one degree higher than that of comparison; the *maximum* of heat was 34° at sun-rise, instead of 44° or 45°, which the spadices furnished when cut only an hour before sun-rise, and when these spathes had opened naturally. During the remainder of the day, the thermometer remained at 33° and 32°. On the following day, after the usual hour of the *maximum* of the heat, the thermometer was still two degrees above that of comparison.

Flowers cut thirty hours before their developement, opened slowly; their spathes separated one-half less from their spadices, and their heat did not raise the thermometer

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ter above 25°. In general, the spadices, which were mutilated some time before the developement of their heat, gave out much less; and a colourless fluid escaped from the divided portions, which is not the case when the heat has been previously evolved. This state of the spadix occurs only once, and its heat generally continues twenty-four hours.

The following experiments, which were undertaken with the view of ascertaining whether it be possible to augment, diminish, or wholly suspend, the heat evolved by the flowers of the *arum*, during the process of fecundation, must we conceive, prove highly interesting to those philosophers who imagine that life is the mere result of the action of certain agents on our orginization.

M. Hubert covered with a cloth dipped in olive oil, a fine spadix before sun-rise; but scarcely was the heat perceivable, when it again almost immediately disappeared, and at the usual hour of the *maximum*, was not distinguishable; by suffering the covering to remain during the rest of the day, the thermometer of experiment and that of comparison followed a similar course. Tallow and grease produced the same effect. On plunging spadices, when at their highest temperature, into cold water, their heat quickly disappeared; but was again renewed on their being withdrawn in the space of twenty-five to thirty minutes.

By immersing spadices at their ordinary temperature into cold water before sun-rise, and allowing them to remain in it till noon, the heat was evolved, even in this situation, and raised the thermometer to 37° or 38°, in half an hour.

After leaving the spadices twelve hours in water, at the end of that period they still raised the thermometer to 28°, and sometimes even to 30°, immediately on being withdrawn. In this experiment M. Hubert observes.—1st, That if the spadices be immersed in the water after the hour of the *maximum* of the heat, their temperature will not be so high on being taken out. 2d, That if any of the extremities of the spadices be allowed to swim on the surface of the water, the supernatant portions do not experience any diminution of temperature, but, on the contrary, are of the same degree of heat as if the rest of the flower had been exposed to the open air. And, lastly, that on the immersed portions of the spadices being withdrawn, and the suspended heat suffered to re-appear, the upper extremities in which the heat was evolved in the open air, did not

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yield more than the portions which had been kept under water.

Spadices kept twenty-fours under water, did not raise the thermometer more than 2° or 3° above the temperature of the surrounding atmosphere.

Spadices immersed nine minutes in water, previously heated to 41°, on being withdrawn raised the thermometer to 34°; but they withered on immersion in water of a higher temperature.

M. Hubert next placed a thermometer, for a quarter of an hour, in the middle of a spadix immersed in spirits of wine. On being withdrawn, the thermometer fell 4° below the temperature of the atmosphere; which, in his opinion, was attributable to the cold produced by evaporation, as in a short time it ascended from 35° to 39°. In this experiment the spirits of wine must be prevented from entering the upper part of the spadix, otherwise the medulla and external part of the flower will become dry in a short time.

He coated some spadices three times with essential oil of cloves; and afterwards placed three on one thermometer and one on another. The first indicated 30° of heat and the second 35°. The lower degree of heat in the first case, most probably, arose from the essential oil not being completely evaporated, and the concrete portion which remained producing a similar effect with the fat oil employed in a former experiment.

Spadices plunged for a short time into highly concentrated vinegar, recovered their heat on the evaporation of the fluid.

A spadix, which had been five times wetted with vitriolic ether by means of a feather, raised the thermometer to 38°.

When covered with honey, the evolution of the heat was suspended in the spadices for almost an hour.

Spadices deprived of heat, by being wrapt up in several folds of a black or white stuff, indicated the same degree of heat, and at the same periods, as when uncovered.

Having tied up, as closely as possible, in a pig's bladder, from which the air had been previously expelled, a thermometer surrounded by five spadices, it indicated only 30°; but on being withdrawn from the bladder, at 8 o'clock in the morning, it almost immediately rose to 45°.

A spadix covered with starch prepared from the powder of the manioc, gave out no heat till its covering dried and fell off in small portions.

Having

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Having formed paper tubes, of a size merely sufficient to contain a spadix, in which a thermometer was previously placed, he closed them, so as to prevent the air finding its way into them along the instrument. The heat was perceptible to the hand on touching the external surface of the tube, and the thermometer indicated 37°.

Four spadices, placed in a similar apparatus, raised the thermometer to 43.

In these two last experiments no water was produced, as in the caper-flask; the paper tubes on examination were perfectly dry. In another experiment he coated the tubes with very thick starch, renewing it every half-hour. The heat present in the spadices at sun-rise was destroyed; and the thermometers, during the whole day, continued to indicate the same degree as one exposed to the influence of the atmosphere. On withdrawing the spadices from the tubes to which they were luted, the heat was re-evolved. A difference in the colour of the tubes produced no difference in the results.

When only one coating of starch was employed, the heat of the spadices became perceptible on its drying.

A spadix introduced into a phial of Cologne water hermetically sealed, gave out no heat; in a pint bottle of the same water, on the contrary, the heat was very perceptible; arising probably from the greater quantity of air contained in the larger volume of water.

In carbonic acid gas, in the air contained in the joints of the bamboo, and in the inflammable air of marshes, the spadices preserved their heat.

Having allowed several spadices to remain in a caper-flask well closed during five hours, a chicken which was introduced into it at the end of that time was immediately suffocated, but soon recovered on being quickly withdrawn. A taper was afterwards extinguished in the same bottle.

It would be needless here to enter into a detail of various other experiments made by M. Hubert, as they are wholly unconnected with the temperature of the spadices of the *arum cordifolium*; it were much however to be wished that the culture of this plant could be extended to Europe, and that some of our intelligent naturalists would employ themselves in examining the phænomenon which takes place during the process of its fecundation.

The *arum cordifolium* continues in flower from May to February; but it is during the latter of these months that the flowers are most numerous, and attain the highest degree of beauty and perfection.

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In 1777, M. Lamark observed, that the spadices of what he terms the *arum italicum** produced a very sensible degree of heat. "When," says he, "the expanded catkins of this shrub have acquired a certain state of developement or of perfection, perhaps at the period when the process of fecundation is going forward, their temperature is so much increased as to convey when handled a sensation of burning heat, far above that of other bodies exposed to the atmosphere. That the heat evolved by these catkins during the state we have already mentioned, is peculiar to them, and produced in their substance, is sufficiently evinced by the following circumstances. Of several catkins composing a tuft which was carefully examined, only one or two of them at a time exhibited this increase of temperature; while the others remained of the same degree of heat as the surrounding atmosphere, till, in their turn, attaining the necessary degree of perfection, they successively displayed the same remarkable phenomenon; this increased temperature continues only a few hours.

From the foregoing experiments it evidently follows, that plants possess a peculiar heat during the whole course of their vegetation, but that this heat, which doubtless depends on their vital action, and which apparently acquires different degrees of intensity, either in certain parts or at particular periods of their growth, is probably so feeble in the greater number of vegetables as to elude notice. It is besides probable, that many other plants would be found to display similar phenomena, at least in those parts destined to their reproduction, if they were examined with sufficient care and attention. Finally, it cannot be doubted that other species of *arums*, as well as all the plants appertaining to this family, are subject to an increase of temperature, under similar circumstances, though in a degree more or less intense in proportion to the thickness of the catkins. It appears truly astonishing, that among the learned men who since this period have written on vegetable physiology, the generation of plants, and the irritability of their sexual organs, not one of them appears to have bestowed sufficient attention to this important discovery of M. de Lamark; though such a circumstance is certainly deserving of the most accurate investigation.

Perhaps this heat exists in the anthers of all plants; but being

* *Arum Italicum*, accaule, foliis hastato-sagittatis, auriculatis, divaricatis, spadice cylindrico luteolo. Encyc. Meth.

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being evolved only in proportion to their size, it may not be perceptible by our senses in the smaller vegetables. Should future and more accurate experiments, however, confirm the truth of this conjecture, it may perhaps explain the peculiar motion of certain stamens, the manner in which the eruption of the fecundating pollen is effected, and several other phenomena, with the causes of which we are still unacquainted.

It is well known, that snow melts more rapidly on meadows than on roads, or other grounds destitute of vegetation. Now as gramineous plants are frequently in flower during winter, may not the more rapid liquefaction of the snow be explained from the heat evolved by the anthers of these plants? Besides, in their natural relations, the grasses are sufficiently allied to the *arum* to warrant such a supposition.

From the experiments of M. Hubert, it would seem, that the mutilation of the spadices does not prevent the development of their heat; that this evolution of heat is carried on independently of the presence of light, but that the contact of atmospheric air is necessary to its production.

This gentleman having communicated the above experiments, as well as others, he had made on the *arum esculentum*, L. to M. St. Vincent, during his visit to the Isle of France, he justly conceived, that the spadices of every species of *arum* must possess a similar calorific property. In order to ascertain this, "I repeated," says M. St. Vincent, "several experiments which M. Hubert had made on the *arum esculentum*, L. in which he had scarcely discovered a perceptible degree of heat. In my experiment, on the contrary, a single flower, at the same hour, and under the same circumstances as the one he examined, raised the thermometer six degrees above the temperature of the surrounding atmosphere."

With respect to the time at which the heat of the spadices of the *arum* is evolved, I conceive it must depend on the same circumstances as the expansion of the corols in vegetables, which flower and lose their flowers at a particular and fixed period. It is not improbable, that the blossoms of all plants expand in consequence of the heat of the stamens acting on the irritability of the petals.

While reflecting on the consequences which might result from the heat of the spadices of the *arum*, I observed, in the cool of a fine morning, a great number of bees covering the male catkins of the *Pandanus utilis*, so as to exclude them wholly from the view. As these catkins are formed

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formed of a collection of stamens, I could not doubt that the bees frequented them with the twofold intention of collecting honey, while at the same time they were cherished by their heat. Too indolent, however, at the time to ascertain the truth of this conjecture, I returned on the following day, to examine a thermometer I had placed on some catkins which had blown during the night; but I was disappointed in the results I expected, owing to the sun being too far above the horizon.

In a short time after, I convinced myself in another manner, that a sensible degree of heat is evolved not only in the anthers of the *Pandanus utilis*, but likewise in those of different species of canes. With this intention I cut some thin slices of a substance which readily liquefies, such as butter of cocoa, and applied them along several stamens, in such a manner, that on melting it sunk into the substance of those portions of the plant with which it was in contact.

It were much to be wished, that Physiologists would pursue a course of experiments which promises such beneficial results, especially if conducted with the same care and discernment as those made by the celebrated Naturalists above-mentioned. R. H.

Clifford's Inn, Nov. 8, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

BY the early insertion of the following farther Remarks upon Mr. Bellot's Statements, you will again oblige me. There is an error which has crept into my former observations, which my readers will oblige me by correcting with the pen, and more particularly since, though evidently an inadvertency, either in my copy produced by chance, or by an accidental error in the compositor, it has called forth a remark from Mr. Bellot. At page 534, line 31st, from the top, for 'intestine' insert 'omentum.'

It is with considerable diffidence I again appear before the Medical World, and more particularly, when the object is to point out what I conceive to be very material errors in practice

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practice, and mis-statements. Every one who appears before the public claims its attention, and its acquiescence or its disagreement with what he has laid down. If we feel the principles and the practice not to be consonant to the established opinions, we are called upon candidly to state our objections, in order to shew the futility of what is proposed, or to call forth such explanations as may establish the practice brought forwards. Had the operation been in any measure explained by the further statements of Mr. Bellot, I should have acquiesced in silence; but when the practice is adhered to, whilst the objections have not been invalidated, and when new points are furnished, which render the practice more and more objectionable, to come forward becomes a duty.

The points to which the public attention was more particularly drawn, were the following.

1st. As to the possibility of introducing the finger under Poupart's ligament in strangulated crural hernia in the male, so as to separate the connections betwixt the neck of the sac and the contiguous parts.

2dly. As to the possibility of cutting Poupart's ligament "with Pott's bistoury introduced upon the finger, cutting obliquely downwards and towards the os pubis."

3dly. As to the propriety of drawing down the herniary sac, so as to expose its mouth exterior to Poupart's ligament.

4thly. As to the propriety of introducing a bent probe into the sac from above downwards, so as to break down adhesions to the bottom of the tumour.

It is upon these points and the defence that I shall now make some farther comments, and shall likewise shew some statements, as furnished by the reply, to be still more objectionable than those which appear in the original statement.

"The fascia and cellular membrane were cautiously divided the whole length of the tumour, which exposed the hernial sac and ligamentum Pouparti, to which the sac was adhering. With some difficulty it was separated so as to admit the finger, and the ligament dilated with Pott's bistoury, introduced upon the finger." Original Statement, p. 46. vol. 18.

"When the stricture is owing to the ligament only, the difficulty of introducing the finger must necessarily be very great; but when the stricture (as it was in this case) is

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is at the neck of the sac, the finger then may be got under the arch with more facility, cutting gently with the bistoury upon the tip of the finger." Explanation, p. 260, vol. 20.

The contradiction which exists in these two passages is very obvious; we cannot doubt but the finger may be introduced under the crural arch, if we cut with the bistoury gently upon the tip of it. This then may be granted to Mr. Bellot; but so far from this having been done, as appears by the first Statement, the finger was introduced in Poupart's ligament, breaking down the adhesions betwixt the neck of the sac and ligament; and when this was done, then only was the bistoury used. In the second quotation it is allowed, that we can get the finger under the ligament if we dilate it as we advance with the bistoury; and as it appears by the original statement, that the bistoury was not introduced with the finger in the first place, the inference is an obvious one, and this might be sufficient to set this part of the operation at rest; but, for several reasons, I am at a loss to know how we can get the finger under the arch with more facility when the stricture is produced by the neck of the sac. The peritoneum pushes down before it into the crural sheath, a thin fascia extended from the posterior margin of Poupart's ligament to the pubis, covering the crural ring: this, with the fascia, forming the crural sheath, constitutes the fascia propria of Cooper, the immediate envelope of the herniary sac; the fascia propria, as it descends through the crural ring, lies in contact with the posterior thin foot of Poupart's ligament, with a small portion of the rounded tendon of the ligament; with a portion of the falciform process of the ligamenta lata, and with the ligament of the pubis; parts which form the boundaries of the crural ring; the herniary sac pushing down this fascia, and taking it for its immediate covering, of consequence, lies in complete contact with it. In some cases of old hernia, a little fat is found interposed betwixt this proper fascia and the body of the herniary sac; this however does not take place at the neck; the fascia propria is close to the parietes of the ring, and the protruded peritoneum to the fascia.

The pressure of the * crural ring upon the neck of the sac

* This aperture is very generally small when compared with the size of the hernial sac; and being much pressed upon by the posterior edge of the crural arch, it undergoes a slow process of inflammation, which thickens very much the fascia in which it is enclosed, Cooper, pt. 2. p. 14.

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sac produces a slow inflammation, the consequence of which is a thickening of the neck; but the crural ring cannot produce this action in the neck of the sac, unless by acting upon it, which it can only do when the parts are absolutely in contact; it is clear then, that whether the stricture exists at the neck of the sac, or is produced by the crural ring, the complete contiguity of the parts is the same. When the neck of the sac is the point of stricture, this is produced by a thickening of the neck, and not by any contraction of it, producing a more observable distance between the sac and ring.

Mr. Bellot then continues, "In some instances, the arch has been found remarkably wide. Le Dran mentions a case, where one might almost thrust four fingers, with the integuments, underneath it. Obs. de Chirurg. T. 2, Obs. 58." In crural hernia; a dilatation of the ring takes place to a certain extent; this dilatation takes place laterally, the fascia of Gimbernat becomes extended; the crural vessels approach nearer to the anterior inferior spinous process of the ilium, and the consequence is a more close pressure upon the neck of the sac, on its anterior and outer side, by the falciform process of the ligamenta lata, and on its posterior and outer side by the fascia of Gimbernat. If we refer to the plates of Mr. Cooper, this lateral dilatation will be apparent, by comparing the relative situation of the blood vessels as they pass under the ligament and the epigastric artery and vein, with that of the crural ring.† The rarity with which we observe crural hernia attain to any considerable magnitude, when compared with the frequency of the disease, is strong proof of the difficulty with which any of these parts give way; the resistance offered by Gimbernat's fascia, and by the fascia rata, is so very great, that even when the hernia has become of an unusual largeness, we are astonished to see the smallness of its neck; of this, fig. 2 and 3, plate 4th, of Cooper's second part are proofs. This smallness of the neck, even in large hernia, is the strongest possible proof of the great inaptitude to dilatation, and proves, that although large crural hernia do exist, yet the dilatation of the crural ring by no means agrees with the size of the hernia. The largest crural hernia which have been observed by Mr. Cooper, were about the size of the fist, one in the male

† Part 2d, plate 3d, fig. 2, with plate 4, fig. 4.

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male, the other in the female. Mr. Thompson, of Edinburgh, saw one reaching half way down the thigh, * in a female. Mr. Hey, in a note, page 230, mentions a crural hernia in the female extending to the middle of the thigh. Mr. Lawrence † relates a case of a female, where the sac contained the whole of the jejunum, the ilium, the cœcum, and the ascending colon, with a large share of the omentum; but what makes these three cases not to apply to the question in hand, is, that they all happened in females. It is notorious, that in females the crural hernia always arrives to a larger size than in men; and this is sufficiently accounted for by the greater diameter of the crural ring in females than in males, a circumstance explained by the discovery of Dr. Monro, that the posterior thin foot of Poupart's ligament is considerably broader in the male than in the female.‡ Hence it follows, that the crural ring being naturally larger in females, crural hernia enlarge more freely: the great obstacle to an enlargement in males, consists in the firm resistance offered by this extended posterior insertion of Poupart's ligament.§ From a consideration then of the anatomy of the crural ring, and of the manner in which a thickening of the neck of the sac takes place, so as to produce stricture, I cannot easily admit

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* Cooper, part 2d. p. 6.

† Treatise, p 238.

‡ The oval space forming the orifice of the crural sheath, is larger in women than in men. The distance from the spine of the ilium to the symphisis pubis is greater, and consequently the crural arch is longer. The third insertion of the external oblique is not so deep in the male as in the female. The psoas and iliacus internus muscles occupy less space in the female than in the male. I have generally found this disease in women who have a very large pelvis, in whom the ilia and pubis project more than usual. Cooper, part 2d. p. 4.

Vide Monro's Treatise on Crural Hernia, p. 51.

§ In all the instances of strangulated femoral hernia, where I have seen the operation, there has never been room to pass more than the very tip of the operator's finger under the stricture, and frequently even this has been impracticable. I have constantly found the same state of parts in the dead subject, except in the remarkable case related above, (a female) and in one instance where the sac actually contained both intestine and omentum. I could not, after removing the protruded parts, pass my fore finger into the opening. Mr. Lawrence's Treatise on Hernia, p. 239.

Suppose we grant for a moment, that in some cases of large hernia in males, the crural ring may become dilated, this would be of no use to Mr. Bellot, since his case was not of any unusual size, and consequently no unusual dilatation could have taken place; at least, no such thing is noticed, either in the original statement or in the explanation.

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mit that we can introduce the finger under Poupart's ligament with more facility when the stricture exists at the neck of the sac.

Again, from a consideration of the above circumstances, I am disposed to adhere to the opinion I formerly gave, as to the impossibility of thrusting the finger under Poupart's ligament, to separate adhesions; and this the more particularly, when I recollect that the subject was a male. Again, from considering the connection of the fascia iliaca, and of the fascia lata with Poupart's ligament, and the extended insertion of the posterior thin foot of Poupart's ligament in males, and from examining the neck of the sac in Cooper's plates, it will hardly appear that the crural arch does in males become very wide; nor is this opinion warranted by the state of stricture which is found by all those practically conversant with the operation.*

These observations would be of little weight were we to regard the statement given by Mr. Bellot from Le Dran; but I shall prove that this case has been placed in a wrong point of view; nay, even that the case itself has never been read. From the manner in which this case is quoted, we should infer, that in an existing crural hernia, a case is given by M. le Dran, where the crural arch was dilated, so that three or four fingers with the skin could be thrust under it: we shall be astonished upon examining the case, to find, that when M. le Dran saw the patient, the hernia with its sac had been returned by the taxis into the cavity of the belly, seven days prior, by M. Arnauld, the son; and the patient was dying from a strangulation of the intestine produced by the neck of the sac within the cavity of the belly. We cannot wonder then, that four fingers, avec la peau, should be thrust into a cavity from whence an hernia and its sac had been displaced.†

Mr.

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* Vide Lawrence, et supra, and p. 30.
C. Bell's Operative Surgery, vol. 1, p. 297.
Hey's Surgery, p. 150.
Monro's Observations, p. 84, and 85.

† That Le Dran had not been consulted by Mr. B. acquits him of any design of wilful perversion; and that it had not, will be clear upon examining the following quotations. "Le Dran mentions a case, where one might almost thrust four fingers with the integuments underneath it. Obs. de Chirug. T. 2. Obs. 58. Vid. Mr. Bellot's Reply, p. 260.

Le Dran found, in the case mentioned above, that the Fallopian ligament had yielded so much, that one might almost thrust four fingers with the integument

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Mr. Bellott then proceeds (p. 260, Expl.). "The necessity of dividing the ligaments will appear, in order to separate

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integuments underneath it. Obs. de Chirug. T. 2. Observ. 58. Vide Dr. Hull, on Crural Hernia.

Page 25, Med. and Phys. Journal, vol. 11. It might be thought indeed that this similarity in the use of words was accidental, had we not another instance to shew that Dr. Hull has been copied without acknowledgment.

"When such a considerable diversity of opinion has prevailed amongst Anatomists and Surgeons, concerning the part of the arch which ought to be divided, the direction in which the division ought to be made, and the manner of executing it." Mr. Bellot's Reply, p. 259.

"They differ, however, very much as to the part of the arch which ought to be divided, the direction in which the division ought to be made, and the manner of executing it." Dr. Hull, Med. and Phys. Journal, vol. 11, p. 57. These shew clearly the source from which the information respecting Le Dran's case had been drawn, and exculpate Mr. Bellot from any suspicion of having wilfully placed the case in a wrong point of view by a partial statement; indeed, Mr. Bellot has been unfortunate in following Dr. Hull so closely in this point, a point in which that learned gentleman has shewn less of that critical acumen than we generally find him displaying. The case in question is a very important one to surgeons; I shall therefore take the liberty of quoting and making a few remarks upon it, retrenching however such statements as do not strictly belong to the case in a scientific point of view.

Le 5 Mars 1726. On vient me prier à une heure apres midi, d'aller voir le Cocher de M. Denis, rue Thibaud-auz-Dez. Y etant arrivé, on me dit que depuis huit jours il souffroit de grandes douleurs dans le ventre qui avoient commencé par une descente à laquelle il étoit sujet, & qu'il tenoit pour l'ordinaire réduite avec un Brayer: qu'on en avoit fait la réduction, vingt quatre heures apres la sortie des parties; qu'il avoit été saigné deux fois, et que malgre la réduction, les douleurs excessives, et un vomissement continuel avoient subsisté.

Mon confrere M. Arnauld le fils, qui avoit fait la réduction de la hernie, voyant subsister les accidens, avoit fait avaler au malade, quinze ou seize onces de vif argent.

J'examinai le malade, a qui je ne trouvai presque plus de poulx, et qui etoit mourant. Il n'y avoit plus de tumeur dans l'aisne; mais en sa place, on y sentoit une espece de vuide & le ligament de Fallope s'etoit tellementt prêté au volume de la hernie, qu'on pouvoit presque fourer, les quatre doigts avec la peau, par dessous.

Je presumai que l'intestin remis dans le ventre avec le sac herniaire y etoit encore enfermé, et étranglé ..... le malade mourut a cinq heures du soir.

L'ouverture du corps vérifia ceque j'avois dit. Nous trouvames dans le ventre le sac herniare, qui avoit trois pouces de profondeur sur huit pouces de circonférence, et dans ce sac etoit encore enfermée une demee aulne de l'intestin jejunum. Tenant le sac a pleine main, je voulus en faire sortir l'intestin, en le tirant par l'un des bouts; mais la chose me fut impossible, tant l'entrée du sac étoit resevrée, et je n'en vins à vout qu'en dilatant cette entrée avec les ciseaux. Comment l'intestin auroit il pû sortie du sac, et rentrer par le taxis? Tout la portion de l'intestin jejunum, au dessus de l'étranglement étoit très dilatée, pleine de liquide, et de vif argent; et par l'inflammation, elle avoit contracté pres d'un travers de doigt d'epaisseur, a toute

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separate the adhesions round the neck of the sac, and to get above the mouth of it, as no opening could safely be made below from the adhesion which had taken place." In the operation for crural hernia, no one doubts the propriety of dividing some portion of the ligament surrounding the neck of the sac; not, however, for the reasons here given, neither did Mr. Bellot divide it for the reasons stated. The ligament was divided, and an attempt made to get into the sac below the stricture, which failed; then only was it found out that adhesions between the sac and its contents existed (see Original Statement). The ligament could not be divided on account of adhesions, which he did not know at that time existed; and as the opening above the stricture was made in consequence of these adhesions being found, it follows, that neither could the ligament have been divided on this account; and consequently, that the reasons given for the division of the ligament are incorrect. Had we no other reasons but these for dividing the crural ring, how very seldom would it be necessary, and yet we know it to be indispensible in every operation.

We now come to examine the explanation respecting direction of the incision, and I am here told to look at the patient as he lies upon the operating table, in order to

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a toute sa circonference. Le mésentere meme qui soutient le jejunum avoit par la meme raison contracté une epaisseur sur naturelle, et les vaisseaux qui y repondent, étoient tres goufles et gorges de sang. Vide Observat. de Chirurgie, Tom. 2d. Obs. 58.

In this case an herniary sac, containing half an ell of intestine, was returned into the cavity of the belly, and the patient lived seven days afterwards; upon dissection, the herniary sac was found measuring three inches in depth, and eight in circumference; the contained intestine was full of liquid and quicksilver. Now the quicksilver was given after the return of the herniary sac, which proves that the communication from above with the strangulated portion was not completely interrupted, and consequently, that previous to reduction the fluid contents of the sac might have been pressed into the belly. In this case, a tumour of the size when measured upon dissection, was not passed through the crural ring; the fluid contents had passed into the abdomen, and a knuckle of intestine and the herniary sac where returned. The case was an enterocele. The state of the crural ring may be judged of by the state of the neck of the sac; such was the tightness of the neck, that the intestine could not be drawn away till it was dilated by the scissars: this sufficiently proves the little dilatation the crural ring had undergone. We can only account for M. Le Dran being so much deceived by considering the anatomy of the crural arch; the fingers were introduced into the space from whence the herniary sac had been dislodged, and the partial pressure upon the fingers produced by the falciform process of the ligamenta lata, was mistaken for Poupart's ligament. A case in some respects similar may be found in Cooper, Part 2d. page 26.

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allow that we can cut Poupart's ligament in the direction stated. In whatever position the patient may be placed, an incision upwards will still be in the direction of a line drawn from the pubis to the ribs. When a surgeon speaks of an incision upwards or downwards, the expression is guided by a consideration of the patient in a natural and erect position; and the direction of an incision obliquely downwards and towards the pubis, will be clearly expressed by the words. We here find an addition given to the former statement of the manner in which the incision was made, not indeed rendering it more intelligible or more practical. "The ligament was dilated with Pott's bistoury, introduced upon the finger, cutting obliquely downwards and towards the pubis," (original stat.)—"The incision was begun nearly in a direction towards the umbilicus, *(i. e. upwards and inwards)* then turning the edge of the bistoury obliquely towards the pubis, carrying it downwards in order to avoid the spermatic end." (*Spermatic chord, I presume*) Expl. p. 260. The kind of incision as explained, although different, is not less singular than the original one. Upon attentively considering this incision, it will appear, that such an one would absolutely cut away a portion of Poupart's ligament: but I contend that such an incision was not practicable; the first incision through the integuments being only a simple longitudinal one, could not allow room for so hazardous and complex an incision into the ligament; and of this we shall be more convinced, when we attend to the manner in which the crural hernia is tilted up over the crural arch. Upon these accounts I must still beg leave to adhere to my former opinions. A method of cutting Poupart's ligament, diametrically opposite to either of those which are said to have been executed, (for, as above stated, that in the explanation differs from that stated in the original) is next quoted,* and

* Dr. Hull's mode differs very slightly from Mr. Elsis, which, as we are told by Mr. Cooper, Part 2d, p. 18, Mr. Borret put in execution, but with great difficulty passed the director under the crural arch, from an opening made above it into the tendon of the M. obliq. ext. The case to which Mr. Cooper alludes, is most probably the one published in the M. and P. Journal, vol 5, p. 116, by Mr. Borret. Since Dr. Hull's mode appears very feasible, and the quotation is given incorrectly from Dr. Hull's statement in Ellen Livesey's case, where the Dr. attempted to put in execution Mr. Elsis's plan, and was foiled, I shall here give his own words. "A small aperture is to be made through the tendon of the M. obliquus externus, about half an inch above the crural arch, at which the point of a grooved

and we are told that this would be a good general rule to follow! May I then have leave to ask, why was it not followed?

Quo teneam vultos, mutantem protea nodo!

I have before said, that points rendering the operation still more objectionable, had been furnished by the defence, the chief to which I allude now comes under review. "After the division of the ligament, and the adhesions were separated, the whole of the sac, with its contents, might have been returned without opening the sac," p. 260. The herniary sac then was dissected up and separated from the surrounding parts: might I be allowed to ask with what object? certainly none; the adhesions betwixt the sac and its contents could not be more easily separated; the sac could not be more easily or safely opened. If the knife is used, the dissection is full of difficulty and danger, on account of the approximation of the large femoral artery and vein; nor could the herniary sac be thus completely separated from its adhesions, by tearing asunder its connections with the fingers. The only objects which could justify so complete and so dangerous a detachment of the sac, are those of cutting it away; returning it into the cavity of the abdomen; or of closing up its mouth by the royal stitch.* None of these were executed, an herniary sac, by a long, a difficult, and a dangerous dissection, was detached from its adhesions; and for what purpose? that it might be laid down again! I know of no author by whom such a proceeding is advised; and I think that the honour of introducing this is justly due to him who put it

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grooved director is to be introduced, and being kept in close contact with the posterior surface of the tendon, passed down to the arch: this portion of tendon is then to be divided upon it, by a probe pointed bistoury with a narrow blade. An assistant is now to draw the spermatic chord upwards, with a blunt hook, or bent probe, and the crural arch is to be cautiously divided from before backwards, till it be entirely cut through, or till the crural ring appear to be sufficiently enlarged; and in doing this the edge of the knife should be turned towards that portion of the linea alba, which lies betwixt the umbilicus and symphysis pubis, that the arch may be cut obliquely inwards, near to its insertion in the os pubis." Dr. Hull, M. and P. Journal, vol. xi. page 254.

* Le Dran thinks there would be no difficulty in tying the hernial sac in crural hernia, "dans la hernie crurale, je ne vois aucune difficulte, de faire le ligature du sac." Obs. de Chirurg. Tom. 2, page 21. It would appear very difficult, upon considering the depth of the neck of the sac, "*l'endroit le plus etroit*;" but we ought always to regard with veneration, the practical opinions of so great a man.

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in execution. And yet we are told, that every deviation from established rule is on the safe side.

"The adhesions prevented the contents being pushed back, and also from getting into the sac below its neck; when this is the case, Monro recommends the tumour to be dragged down, to get into the sac from above downwards." Exp. 261. Dr. Monro, as I have before stated, advises, when there are adhesions, that we should attempt to get into the sac from above, downwards, through the neck; but no where, that for this purpose the sac should be dragged down. The herniary sac was first dragged down, and then an attempt made to get into it below the stricture; adhesions were found, we are told, and then the attempt was made to get into the sac, by an opening in the peritoneum above its mouth. It is clear then that the motives are mis-stated in the above quotation, as will be evident upon comparing the above with the following. "Cautiously tearing asunder the adhesions betwixt the sac and the ligament all round, I then drew down the tumour a little, which brought to view the mouth of the sac. Here there appeared to be considerable stricture. I several times attempted to raise the sac from its contents, in order by slight scratches to make an opening into it; but this was ineffectual, as a complete adhesion had taken place between the sac and its contents, throughout the whole of the tumour. At length I succeeded in making a small opening a little above the mouth of the sac." Orig. Stat. p. 46 and 47. The elasticity of the peritoneum is next urged as a proof of the *possibility* of dragging down the sac. I deny not the capability of extension of the peritoneum, I only contend, for the reasons I have before stated, that the force necessary to expose the mouth exterior to Poupart's ligament, cannot be exerted with safety to the patient, and more particularly when such a train of symptoms are present, symptoms which Mr. Bellott allows, "*are the forerunners of death, and denote a speedy dissolution.*" (Orig. Statement.)

"This division *(of the ligament)* together with stretching the sac, brought the *neck* into view." (Explan. 261.) "I then drew down the tumour a little, which brought into view the mouth of the sac." (Original Statement, 47.) Upon these I have to remark, that the neck of the sac and the mouth are distinct parts; and that if the neck of the sac only was exposed, as stated in the explanation, then the mouth was not exposed, as stated in the original. The neck of the sac is half an inch and more in length; and

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and to expose its mouth, it would be necessary to drag down the sac for this extent. We are told that Poupart's ligament being divided, such an extensive dragging down of the sac would not be necessary. Of the division of the ligament my ideas are by this pretty well known; but granting all this, the danger of attempting to pull down the sac will be apparent.

"The possibility of breaking adhesions with success, is evident from the result of the case. (Expl. 261.) My objections have been made to the propriety; the possibility I have granted to the fullest extent, if a surgeon is found hardy enough to risk the force necessary to break down adhesions of such a nature, unseen, and by guess. The obvious mode of prosecuting the operation, at this period, consisted in introducing a bent probe just through the stricture, and upon its *probe* point making a small hole sufficient to push through the point, and afterwards either cutting the neck of the sac upon the probe or a director. (Vide Appendix to Monro on Crural Hernia, page 14) the adhesions would then have been separated, without the risk attending, blindly pushing down a probe to the very bottom of the tumour. To thrust a probe to the bottom of an herniary sac, where the contents adhere to every part of it, and to each other, is certainly a deviation from established rule, and that not upon the safe side. The only thing I shall now bring forward is an assertion advanced rather too hastily, "The opening which was made above the mouth of the sac, was not made into the cavity of the belly." The incorrectness of this is too evident to require a serious refutation.

When the extensive diffusion of this Journal is considered; when we recollect that not only the experienced, capable of forming accurate judgments upon the cases given to the public, but the young and inexperienced, are its readers, it surely cannot be considered intrusion, that I have thus extended my remarks upon so important a subject. The ideas of the latter are two often attracted by the outward shew and brilliancy of an operation; when the young mind dwells upon single ideas or impressions, they are with difficulty eradicated as the judgment becomes more matured. When cases are thus brought forward, in opposition to anatomy and surgery, it is of the greatest importance they should be placed upon their true and proper grounds; and that they should stand or fall by their own intrinsic weight. The leading points of objection have been increased in number by the explanation. If the o-

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peration, as thus said to have been executed, keeps its ground, it is evident that a complete revolution will take place so far as goes to the operation for crural hernia; but of this I feel it cannot do. Again, I apologize for the great length of my remarks, and can only plead the necessity induced by the importance of the subject.

From the collision of different sentiments, sparks of truth are often elicited.

I am, &c.

September 23, 1808. JOHN ALDER BRADLEY.

In the midst of a controversy, it might seem partial hastily to refuse a paper sent by an author in his own defence; we reserved however the above without noticing it in our correspondence of the last month, doubtful how to dispose of it. As controversy cannot be entirely avoided in a work the object of which is mutual improvement, we take this opportunity of requesting that such gentlemen as find it necessary to defend themselves, or to offer useful remarks on others, will do it with perfect politeness, and with as much brevity as possible.

Though the two following Papers are controversial, yet we are sure our Readers would not excuse the omission of so much useful information as they contain. The authors too may claim the privilege of defending themselves; but we must again urge the necessity of declining to receive any remarks, whether anonymous or otherwise, if mixed with severity or petulance.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AN anonymous correspondent in your last number, who has done me the honour to animadvert on my paper, on the prevention of hydrophobia, has prefaced his observations with a little flourishing about hasty assumption, new remedies, and medical absurdity, which may be very amusing, but, unfortunately, is wholly inapplicable to the subject in question. It is, in truth, a sort of random firing from behind a skreen, without aim or object.

A plain recital of a series of facts leading to a certain conclusion, can be no hasty assumption; nor can a practice as old as the time of Celsus, be fairly classed with new remedies;

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medies; and, as to medical absurdity, C. B. himself, by his eulogy on my practice, pronounces honourable acquittal. My sole motive in requesting your insertion of that paper, was, to counteract the effect of the two unfortunate cases alluded to, which I considered as tending to prove the inutility of the destruction of the part bitten by a rabid animal, and, consequently, to check the only practice that has been fairly established as a prophylactic in one of the most dreadful of human calamities.

I have little time and less inclination for controversy; but as the subject is of some moment, I will, with your permission, offer a few observations on the doubts and objections of this anonymous author.

In my narrative I have said, "The dog was following a proud bitch, and on the boy coming in his way, he seized him by the heel." The pursuit the dog was engaged in, was mentioned, not altogether with the intent of accounting for his biting the boy at that particular time, but rather to prove the progress of the disease in the animal, by the subsequent act of biting and tearing the same bitch two days after. C. B. however, seems disposed to think the interruption to the amour, an offence of a grave nature, fully adequate to call forth the resentment of the dog; and this might be very true, had the boy interfered on the occasion; but the fact is, he was accidentally crossing the yard, and offered no interruption to the animal whatever.

But C. B. doubts the existence of disease in the dog, at the time he bit Master Hill, because there is no proof of his being hydrophobous at that period. By the term *hydrophobous*, I presume the gentleman would have us understand *rabid*, because the single symptom hydrophobia, as you have justly observed in a note, is not essentially necessary to constitute that degree of rabies in the animal, which is capable of communicating hydrophobia to the human species. Further, if C. B. will have the goodness carefully to examine the cases of genuine hydrophobia, succeeding the bite of rabid animals, published within the last fifty years, he will find that a considerable number of the unhappy persons were bitten by dogs not supposed at the time to be mad.

The next objection started by C. B proves, I am sorry to say, his complete want of information on the subject. It is conveyed in these words. "I doubt whether any dog ever lived four days after having begun to be affected with symptoms of the true rabies canina." This has certainly

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happened within my own experience, but I will take the proof from the most incontestible source.

Mr. Reynel, whose observations appeared in several periodical works in the course of the last year, and whose extensive knowledge in whatever relates to the economy of sporting dogs, is universally admitted, says, "I have seen dogs eat, and lap water, the day before their death, which generally happens between seven and ten days after the first symptom has appeared." He also observes, that "mad dogs appear to be capable of communicating the infection early in the disorder, as soon as they begin to quarrel with or bite other dogs." Here then, gentlemen, we have contemporary authority of no ordinary estimation, to prove, that hydrophobia is no necessary symptom of rabies in dogs, and also perfectly to remove all uncertainty, respecting the number of days a dog usually survives the first symptom of rabies. Hence, C. B. may learn, that instead of dying within *four* days, dogs generally live from *seven* to *ten* days, after being affected with symptoms of the true rabies canina.

Another doubt arises from the early period at which, after having been bitten by the dog, the cat and the bitch became affected. Let us see how that stands. Mr. Reynel has never known a mad dog shew symptoms of the disease in less time after the bite than ten days. It was the tenth day that the cat became affected, and bit the girl, and the thirteenth day when the bitch first refused food. It was in the hottest season, and the air at a high degree of temperature, capable of giving activity to the virus. From all the foregoing circumstances, I feel confident of having plain truth on my side, when I assert, that in these instances, there is no deviation from the common course of infection.

Having briefly, and I hope satisfactorily, replied to the doubts and objections of your unknown correspondent, I would ask, if he is serious in comparing the ridiculous amulet he calls a camphor bag, with the excision or destruction of the part bitten by a rabid animal? To my limited capacity, the incongruous association savors more of absurdity than science. I must likewise confess my want of discernment, to discover the *valuable information* contained in the tale of the drunken footman, from Dr. James. If this sort of reasoning carries any point whatever, its effect must be to damp or restrain every exertion to relieve, by representing all endeavours as futile or nugatory.

In the science of medicine, a moderate share of scepti-

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cism is laudable and proper; but what are we to think of a man, who positively rejects facts, and wilfully refuses conviction? Such, if he actually perused the whole of the case he attempts to criticise, is your Correspondent C. B. Among his observations on the case of Master Todd, related by Dr. Rush in your last Number, is the following passage. "The having been bitten by a dog, affords, as I have before observed, of itself, no presumption of the nature of the disease, unless the dog was proved to be mad. That this was the case in the instance before us, *there is no attempt to show.*" What will your numerous and respectable readers say to all this, when they find that Dr. Rush has expressly stated the most unequivocal confirmation of the madness of the dog in these words. The same dog which bit Mr. Todd's son, bit at the same time, a cow, a pig, a dog, and a black servant of Mr. Todd's. The cow and pig died; the dog *became mad*, and was killed by his master." If this be not proof sufficient to convince the most sturdy sceptic, where are we to look for better?

A critic should stand on commanding ground, such as to enable him to have a comprehensive view of his subject in all its bearings; it is therefore greatly to be desired, as you have solicited the future correspondence of C. B. that the next time he takes the trouble to write for the information and edification of his professional brethren, he will remember the advice of Horace.

(Scribendi recte, sapere est principium et fons) and deem it a primary qualification to understand the subject himself. I am, &c.

CHARLES ARMSTRONG.

Upper Charlotte Street, Fitzroy Square,
November 13, 1808.

To the Editors of the Medical and Physical Journal.

"Books of Medicine, those monuments of Nature's frailty and Art's resources, when they treat of diseases, even the most trivial, would convince us that death was really at the door; but when they speak of the virtue of remedies, they place us again in marvellous security, as if we were immortal." MONTESQUIEU.

GENTLEMEN,

I Think your correspondent, Doctor Mossman, has indulged himself in a severity of censure, which is not altogether consonant with good breeding Illiberal and unnecessary

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necessary reflections on the qualifications of another, do not tend to serve the cause of truth and science. I shall not retort upon Dr. Mossman, nor should I have even deemed it necessary to reply to him at all, but that he has drawn conclusions, which, I think, my paper did not warrant.

I certainly did not expect, when I transmitted to you my doubts, (and they were merely doubts) as to the usefulness of mercury in typhus fever, that they could have called forth so much angry and unprovoked attack from so many different quarters.

Too many of the pages of your respectable Journal, have already, I think, been devoted to this bootless controversy; I will, therefore, be as brief in my reply to Dr. Mossman as possible. For the sake of brevity then, since the Doctor has so gladly dropped the further consideration of mercury, I may limit myself to proving that the digitalis, the first article on his list, is falling into disrepute.

It is no great evidence of Dr. Mossman's attention to what he reads, if he infers, from my paper in the fourth number of your nineteeth volume, that I deny to the digitalis a powerful influence over arterial action. Its powers, in this respect, are unquestionable. Nor did I, as I recollect, *reprobate* the use and application of this vegetable; but I must be permitted still to doubt, whether its sanative powers be commensurate with the exaggerated and extravagant eulogies, as I conceive, of some, who have written on its medicinal properties; and, in expressing my doubts, I do not hold myself as "*unreasonably sceptical;*" nor, in exercising my own judgment, do I consider myself as "*unreasonably opiniative.*" Every medical man has a right to found his opinions on his experience, and I am ready to confess that, notwithstanding all Dr. Mossman has now, or on a former occasion, so vauntingly and confidently said on the subject, the powers of the digitalis have appeared to me much more limited than he would have me believe them.

I much question whether Heberden, whose book is indisputably a work of sterling merit, meant to express more than this, when he said: "Enervant omnia, quæ dicuntur narcotica, tum maxime herba digitalis."

I insinuated that the digitalis, with some other remedies, which I named, seemed to be destined to run the course that remedies usually do, when unreasonably extolled: i. e. to have their period of temporary celebrity and subsequent neglect. And I might here, perhaps, mention the cicuta

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cicuta as an example; a medicine which, not many years since, was administered with high expectation of curing cancerous disorders; and though it continues to be employed by some in those affections, yet, I imagine that it does not now hold the place in the opinions of medical practitioners, in general, that it once did.

Doctor Mossman refers me to a host of modern authors, in support of his opinion of the digitalis. Let us hear what they say; and then judge of Dr. Mossman's claim to candour and accuracy.

According to Dr. Hamilton, we know but little of what was done with the digitalis from the time of Fuchius down to Withering. That little, however, clearly evinces that the same discrepance of opinion respecting its properties and effects, which now exists, obtained then, and that it finally sunk into disuse.

Dr. Hamilton also quotes Sir George Baker as saying, that after the digitalis had been, in his time, esteemed a powerful remedy, it was, at another period, utterly rejected, as a plant, totâ substantiâ venenosâ.

Dr. Ferriar affirms, that it never suspended the appearances of *insanity* for a moment. He, moreover, gives in his second volume but a discouraging account of this vegetable; and, in his third volume, it is not even noticed! And yet, Dr. Mossman is absurd enough to refer me to this very work for proof of the marvellous effects of this plant!

Dr. Currie calls the digitalis a sedative poison, and condemns its use in *hydropic cases*.

Dr. Darwin, in the second volume of his Zoonomia, evidently begins to more than doubt of the beneficial properties of this medicine.

Dr. Mease, of Philadelphia, notices the disrepute into which the digitalis has fallen, in the following words. "The Foxglove is a medicine, which for some time stood high in the list of the Materia Medica, but for various reasons, appears to have in some measure lost the character once formed of it."

Dr. Beddoes is directly in opposition to Dr. Mossman respecting the use of digitalis in *pleurisy*. "If," "says Dr. B. "any one should be mad or wicked enough to forego the so certain resource of the lancet, in favour of the *sedative* virtue of the digitalis alone, he would, I apprehend, increase the disorder," &c.

Dr. Hamilton too joins in *reprobation* of the digitalis in *pneumonia*, and asserts that he has been "too often disappointed

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pointed in his hopes of sparing the further loss of blood, in inflammatory affections, and especially in pneumonia, by the agency of the digitalis; not to be satisfied, that, however respectable the authors by whom it is supported, the opinion of the powers of this remedy over inflammation is incorrect."

Does Dr. Mossman then expect me to pay more attention to his prayers and supplications in favour of the digitalis, and on the score of humanity too! than to the salutary warning of Dr. Beddoes, and the respectable authority of Dr. Hamilton? My experience of the digitalis in pneumonia, would determine me entirely to coincide with the respectable authorities just quoted, though, by so doing, I should hazard Dr. Mossman's resentment, and run the risk of being denounced as a monster for my inhumanity. Indeed, I have never found that "*the digitalis possesses powers approximating to specific,*" in this disorder.

Dr. Hamilton adds, at the close of his Medical History of the Digitalis: "From this period little has been written on the subject of the digitalis, and the remaining part of the medical history of this plant can record little more than the instances in which it experienced almost total neglect. The periodical Journals have long ceased to exhibit the high wrought encomiums upon it, that a few years since so amply contributed to swell their pages; and the late authors who have written on the disorders, in which the beneficial agency of the digitalis was supposed most conspicuous, have not even mentioned it!"

Now what will Dr. Mossman say in answer to these passages, most of them cited from those very works to which he has so triumphantly referred. I should be sorry, however, to drive him (for he is a man of fine feelings on this subject) to despair; I must therefore add, by way of consolation, that, unfortunately, a great many consumptive patients are met with in this district, and that the digitalis has been usually given, aye, *and in the very form and dose* (matter, I hope, of pleasing astonishment to the Doctor) *as recommended by him, precisely as if we had been previously so instructed by his last communication.* And it has been so administered, because, as the Doctor has it, it is *a fashionable medicine,* besides, præstat certe anceps remedium experiri quam nullum.

The foregoing citations and remarks have already extended much beyond the limits which I had, at the outset, prescribed to myself; I shall, therefore, withhold my authorities

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authorities and reasons for the judgment I likewise pronounced on the uva-ursi, till Doctor Mossman shall have made a suitable apology for the errors he has committed, and the rudeness of the language he thought proper to employ.

I am, &c.

THOMAS TAYLOR, Surgeon.

Harleston, Norfolk, Nov. 12, 1808.

P. S. Permit me to thank Dr. Mossman for his very ingenious exposition of the luminous diatriba of his newly adopted protegè. The text is worthy of the commentary!

Further Account of the Case of Abstinence contained in our last, with the Physiological and Pathological Remarks of Dr. BOURNE.

ANN Moor, a poor woman, aged 58, residing at Tutbury in the county of Stafford, by common report hath lived about eighteen months without taking any solid food whatever, and the greater part of the time also without liquids. In the early part of the history of her abstinence, she was accustomed to swallow occasionally small quantities of tea, and water; but this giving her considerable pain, she has for some months past washed her mouth only with a little cold water, two or three times a week, without swallowing any part of it. Such was the account I received a few weeks ago, and that the medical gentlemen in the town and neighbourhood, many having been to see her, were fully convinced of the truth of the story. Anxious to see so uncommon an instance of deviation from the natural laws of the human œconomy, I visited her on Monday the 17th instant, accompanied by Mr. Tylecote, Surgeon at Appleby, Leicestershire. From the vague and imperfect accounts we had each of us received of the situation of this poor woman, we expected to see an almost living skeleton, whereon were extended little more than the common teguments of the body. How great was our surprise then to behold a good-looking countenance; I do not mean to say a healthy one; and less general emaciation than may every day be witnessed in cases of fever, and in the last stage of a consumption. We had been informed, that upon laying the hand on the belly no traces of the bowels could be felt; but

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but that the integuments almost only remaining, the vertebræ of the spine, and the great artery descending along its course were palpable on the slightest pressure; insomuch that among the common reports, it is said that the viscera are drawn up into the chest. We found the state of these parts very different from the above description of them, as will appear by the subjoined account of our examination. And I suppose the difference in this respect from that given by some of her other medical examinators, arises from the occasional greater or less distension of the bowels themselves, and the tenseness or flaccidity of the skin over them. Her pulse beat 96 in the minute; was regular, rather small but hard, and underwent little or no variation during our examination. Her voice clear and strong, and respiration easy and free. Tongue somewhat dry and white in the middle, yet no thirst. She has frequently severe pain under the short ribs of the left side; increased on pressure there, and also by lying on the right side. She has sometimes head-ach, but when free from all pain can sleep very comfortably. Perspires a little occasionally on the hands and feet alone; and has sometimes general increased heat of the body, and flushings of the face. Her skin was then rather dry, as is found in a slight attack of fever. Placing our hands on the belly, the skin there was soft and loose; and the bowels plainly to be felt distended with air and some fluid, which evinced themselves also to our organs of hearing by a gurgling noise, similar to what happens by pressing on a membraneous tube containing air and water. And so far were the spine and great artery from being easily felt, it was only by considerable pressure that this could be done; which gave her great pain and nearly brought on fainting; and was followed by several eructations of flatulence; and she says, she sometimes has discharges of air per anum.

The following is the history of the case, as related by herself.

Some time prior to the summer of 1806, she was troubled with occasional pains of her sides and stomach, especially after eating, but her food was not then rejected; and she did not consider herself so ill as to pay any particular regard to these circumstances. She had had, for a long time, the care of a boy who had the evil, on whose body were a number of very offensive sores. At the above period her appetite began to decline, and what little food she took, her stomach nauseated, but did not reject; and she fancied it had the smell and taste of the ulcers of the scrophu-

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ous boy. In November following she felt herself unable to do her usual work, which was that of picking or beating cotton. In the month of March 1807, she was seized with fits, which by her description appear to have been epileptic; these continued about a fortnight, and were succeeded by cramps at the stomach and vomitings. She has had no fits since. About Easter of the same year, finding a total want of appetite, and much pain after swallowing, she gave up the attempt; and has never taken any thing solid since; nor has she had any desire for food. For some time she continued to take now and then a little tea and water, as mentioned above; but having now no thirst at any time, she contents herself with washing her mouth only two or three times a week. She has had no stool since the third of August, 1807; but she passes from half a pint to a pint of pale urine once in two or three days.

This extraordinary mode of life, as might be naturally expected, did not obtain general belief; and she was accordingly looked upon by many of her neighbours as an impostor. To dissipate this notion she consented to be removed to another house; where she was attended day and night for nearly three weeks, by persons consisting partly of medical men, and partly of such of her neighbours who disbelieved her story. These relieved each other regularly every four hours, and were satisfied that during the above period she took neither food nor drink, excepting once, by desire, she swallowed a spoonful or two of water; which gave her much pain.

Such are the circumstances attending this case, as collected by the testimonies above described; but, forming perhaps an unique instance of such protracted abstinence, and so very contrary to the established habits and indispensable wants of animated nature, many persons are yet nevertheless disposed to disbelieve the fact. If however there be any deception in the matter, it appears to be the most complete imposture ever practised. I think we can scarcely withhold our credit to the three weeks trial; and if so, I see no reason for doubting the truth of the whole. It is true indeed that, in many cases of disease, in fever especially, we find an almost total cessation of appetite for solids for three or more weeks; but then there is usually an increased desire for liquids; and at the termination of the disease, the general appetite returns. It is owing to a want of appetite entirely, I imagine, that the continuance of life here, under the privation of food, is

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to be accounted for. For hunger, if not satisfied, is itself a stimulus, which would in time destroy the body; hence those unfortunate persons, who are completely deprived of the means of gratifying this appetite, quickly die. How then has life been sustained in the case before us? If we examine the subject philosophically, I think we may come to some rational conclusion. The elementary principles of the human body, or those into which it may be reduced, by means of chemistry, are very few. The food, whether solid or liquid, destined for its nutrition, and repair of the changes and waste it undergoes during life, is also resolvable into the same elementary principles. And these principles are moreover present in the atmosphere which we breathe, combined as it always is with watery vapour, &c. And it is only by the different combinations and modifications of these few elementary principles that the various articles of food; nay, the almost infinite variety in the products of nature, present themselves to our view; that one thing is sweet, one is sour, and another is bitter; this is soft and that is hard; one proves salutary, and another poisonous, &c. And according to the relative affinities which these elements have with each other, one is more readily than another acted upon by the juices of the stomach, intestines, &c.; or in familiar words, one is of more easy digestion than another. The universal receptacle for food, in mankind at least, is the stomach; but if the body be supplied through this medium with nutriment, containing only those principles which exist in the atmosphere which surrounds us; and if by the total want of appetite, this supply be precluded by the usual means; it is reasonable, or it is not unphilosophical at least, to suppose that life may be sustained, if the same principles can gain admission by other channels. It appears that the vigour and strength of the body cannot be maintained in this manner, as is the case with the subject under consideration; yet life itself may thus be preserved for an indefinite period. The well-known instances of hybernating animals afford proofs of its continuance for months by respiration alone.

I shall conclude with a few observations on two or three of the particulars noted in this case. In the first place, the nutrition of the system is evidently introduced by the lungs; it is not our purpose to inquire here by what means it is afterwards assimilated; she lives *apparently* on air alone; to use her own expression "she loves air," and has the chamber window constantly open. As she almost continually lies in bed, it is not probable that much is furnished

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ed by absorption from the general surface of the body. But it seems that a kind of digestive process is carried on in the intestinal canal; and that a species of chyle is there formed. That there is some secretion there, which undergoes a decomposition of its elementary principles, is apparent from the presence of air and moisture, which we discovered by pressing the abdomen with the hand; hence arise the frequent eructations of flatus, &c.; but from the tenuity of the matter imbibed, there are no gross particles to form what is usually evacuated by stool. The hardness of pulse and dry state of the skin, seem to indicate that there is not a sufficiency of moisture introduced into the system to answer the general intentions of nature; and probably owing to this defect, life will be gradually exhausted. I apprehend that a thickening, perhaps an ossification of the arterial system, has thus commenced, and will keep increasing; having begun at the most remote points from the heart, which afford the greatest resistance to the action of that organ; thence ascending to the greater vessels and to the heart itself; and from the gradual obliteration of these, life will become extinct in like manner to the burning out of a lamp. How long a time may be necessary for the completion of this process it is impossible to say; but from present appearances there is reason to believe she may continue some months longer. It is probable the frequent use of the warm bath, if she could bear it, would tend to defer her dissolution.

Atherstone, Warwickshire, October 27, 1808.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HYDROPHOBIA is at all times an important subject, but more especially when it has been attended to with that diligence, and related with that accuracy which marked the case of Mrs. Chandler, who died in St. Bartholomew's Hospital on Wednesday morning, August the 10th, 1808, and whose case has been given so accurately by Dr. Powell.

I am induced to submit to your consideration, an account of the disease and death of her child, three months old, especially as no event of the kind has, I believe, been recorded.

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It is not yet, I think, ascertained whether the human subject can communicate the venom which produces hydrophobia, still less whether such communication can effect a child sucking at the breast of its mother whilst under the disease.

On Monday, August the 8th, eight days subsequent to the removal of the child from the breast, I was requested by the nurse of the child's ward, in the workhouse of St. Sepulchre, London, to see a child who had been seized with convulsions, to which I immediately attended.—On examining the child, there appeared spasmodic affection, especially about the eyes; her stools were black. I ordered medicines, which relieved the bowels; but on the following day, certain appearances about the head induced me to communicate my doubts to Dr. Powell, whether the mother's disease could be the cause of the child's. He did me the honour of seeing her on the Wednesday, and gave it as his opinion, that the child's disease was not hydrophobia.

I saw it on Thursday the 11th with Mr. Tuckwell; it had screamed in the night, there was much excitement, a quick pulse, and heat, but no marked appearance of the disorder in his opinion. The bowels remained better.

Friday, the symptoms increased, and the bowels were again unwell. I had recourse to the same medicines, which relieved her, but in the evening she was seized with (as described by the nurse) staring and fixed eyes, difficulty of swallowing, with a vomiting and a frothy appearance from the mouth.

Saturday, the symptoms about the head remained the same; the bowels were quiet, and the motions nearly natural as to colour and consistency.

Sunday morning, it screamed; the other symptoms much the same.

Monday, the symptoms of the head were much increased, and the whole body put on an appearance which prognosticated dissolution.

Tuesday, when I saw her, strabismus had come on; the eyes, particularly the left, seemed insensible to light, and one side was much warmer than the other.

I requested Mr. Clarke to see it, and took a tea-spoon filled with water and poured it into its mouth. It passed the œsophagus, but we were both of opinion that giving the water produced spasmodic affection.

I saw it in the evening with Mr. Wheeler, who was of opinion, there was no distinct sign of hydrophobia, and at eight o'clock she died.

Ap-

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APPEARANCES ON DISSECTION.

On Thursday, about one o'clock, she was opened; the vessels of her head, like her mother's, were over-charged, there was more water than usual in the ventricles; the whole abdominal and thoracic viscera were perfectly healthy.

It was agreed that hydrophobia was not identified in the child, but it might be said there had been much nervous irritability, and the only doubt is, whether such irritability might not be occasioned by the mother's disease.

In this case, we find a child in perfect health, until she is taken from the mother, who has suffered death from the bite of a mad cat, which death is not produced till thirty days after she is bitten.

The strabismus, a diagnostic sign of hydrocephalus, appears on the ninth day, but the increased actions on the fourth.

It is also to be remarked, that upon dissection, we find no distant cause from the appearance of the bowels, or any other part of the viscera, that hydrocephalus could produce, as they were in a most healthy state.

The difficulty of swallowing on Friday, and the vomiting which followed, together with the observation of Mr. Clark and myself, on giving water to the last day, are circumstances by no means unimportant.

Such, Gentlemen, are all the particulars of this case, which I marked as they occurred, and which if you think with me ought to be recorded, are at your service.

I am, &c.

No. 9, Giltspur Street, West Smithfield, August 27, 1808. LUKE HODGSON.

Impartiality, and a wish that every well-ascertained fact should be recorded, induce us to insert the following short communications as we received them.

To the Editors of the MEDICAL and PHYSICAL JOURNAL.

Gentlemen,

TAKING up, a few days ago, your Journal for September last, I observed a paper of Dr. Walker's, in which he supposes, (if I clearly understand him,) that the hydrophobic virus may lie dormant for a vast length of time in the

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part where it is inserted, and, finally, being disengaged from its "encystment," may come in contact with a living fibre, and then act on the system. This hypothesis has much plausibility in it, and I am induced to think it as satisfactory as any that can be offered. But, Sir, allow me to mention, that the same explanation was suggested years ago by Dr. Jenner among his disciples, with regard to the long-dormant state in which the vaccine virus remains after its insertion.

I. C. H.

B———.

On the Vaccine Pock.

THE first conjecture of Mr. Goodhall, on the origin of the cow-pock on the thigh of his little patient, (p. 334) must certainly have been correct, notwithstanding the statement of the mother. I believe the vaccine pock is never produced on the human subject but by actual application of the matter. Does the following little bit of my tediously lengthening out manuscript on vaccination, which you already announced in your Journal, and which still occupies my leisure hours, bear sufficiently on the present subject to be now inserted?

The vaccine pock is, of all the pimples, spots, or eruptions, which ever appear on the human body, the most distinctly characterised. It is *unique*. I know nothing that is imitative of it. We speak incorrectly in calling any other eruption spurious cow-pock. I am of opinion that all those which have been called secondary pocks, have arisen from an accidental secondary inoculation, as from a child's scratching itself at the inoculated part, and afterwards on some other part, with its nails thus charged with the vaccine ichor. An eminent and very early inoculator told me, that if a patient received a wound or scratch in any part of the body while under inoculation, a vaccine pock would arise at the part, from the system being generally affected. The notion was erroneous. An infant, a week after inoculation, caught a violent cold; the inflammation on the lungs was evident and most alarming. A blister was immediately applied to the chest. If the vaccine affection had been determined to the part so denuded, it must have killed the patient. The child was relieved, and recovered.

J. W.

Salisbury Court; 5, x, 1808.

Remarkable

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Remarkable Case of Cow-Pox.

A LAD, 14 years of age, was inoculated with the vaccine disease in his left arm, which went through its course in a very decided and regular manner; on the ninth day he had a slght attack of fever, the axillary glands enlarged and painful, continuing about two days; the disease receded from that time, and on the twenty-first day the scab had fallen off. Seven days after this time, and twenty-eight from the day of inoculation, the lad had a smart attack of fever, more violent than that which occurred on the ninth day. Upon investigating the cause, it evidently arose from three vaccine vesicles, of the size of those of the ninth day by inoculation, formed upon the lower part of his loins. The absorbent glands in each groin were swelled and painful.

JOHN MITCHELL.

Kington, Herefordshire, Oct. 3, 1808.

N. B. No matter could possibly have been applied from other vesicle to the skin upon his back.

To the Editors of the Medical and Phyfical Journal.

GENTLEMEN,

IF I had known that you admitted random *Hypercritics* into your Journal, I could have enabled you to spoil as much paper as you could wish. I allude to an objection in your last, to the term *Morbid Anatomy*. *Morbidus* is regularly derived from *morbus*, and can only mean, as all our dictionary writers translate these derivatives, "*of or belonging to.*" The Latin is allowed to have a peculiar advantage above most other languages in its abundance of these adjectives, by which their writers escape the perpetual repetition of the genitive case. It is therefore less to be wondered, if your correspondent could find no appropriate word by which he could translate the term into any foreign tongue. This was, I believe, with Mr. Addison, a test of wit, but wit is seldom admitted into the title page of philosophical works. Even if it were, would it be fair to translate an expression backward and forward into the same language? Morbid is either English or Latin. If the first, why is it translated *diseased?* If the last, is it not a little *sickening* to see it translated *ægrotans?*

Dr. Soemmering has found no difficulty in procuring a

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German word for *morbid*; and I cannot help remarking, that *Zergliederungskunst* is a somewhat unfair translation of *Anatomy*. The former, by its termination, must be confined to the *art* of anatomy; the latter may very well be translated *Bau*, as it is often used for *structure* by every medical writer. The *anatomy* of the human body; anatomy of the viscera, &c. The transition to *diseased anatomy* is very easy, when the diseased structure of individual parts is to be described.

Having mentioned Mr. Addison, permit me to produce an authority from the Golden Age of our language.

" *Glad chains.*] The ignorance of these moderns! 'Twas altered in one edition to Gold chains, shewing more regard to the metal of which the chains of Aldermen are made, than to the beauty of the Latinism or Grecism, nay of figurative speech itself. *Lætas segetes*, glad for making glad, &c.

SCRIBLERUS."

On the Importance of early Blood-letting in Acute Organic Affections. By Dr. Adams.

OUR last number contains a very useful communication from Dr. Kinglake on the Use and Abuse of Blood-letting. It is not my intention to notice the objections which will be made by some to the manner in which the buffy incrustation is formed under certain circumstances. It is enough that the author describes the result of his own experiments, by which every one is left to assign the less obvious causes. But as he has shown with much practical accuracy, the disadvantages of too free blood-letting, it may not be amiss to remark, that there are some cases in which the early and free use of the lancet is the only means of preserving our patient. This is the more necessary, because it not unfrequently happens, that after a copious, but too long deferred blood-letting, the patient shall die with all the symptoms of debility, from a too free use of the only remedy which could have saved him.

Master ———, a somewhat delicate child, about 10 years old, was seized, during the present autumn, with violent cough and pain in the abdomen. The gentleman who attended him, describes his pulse quick, and face suffused with a dark red colour. On the following day the symptoms remained the same. On the next, the febrile symptoms

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toms increased towards the night. On the 4th, [of the disease] the symptoms were greatly increased, and I was consulted about three in the afternoon. At this time, the colour of the patient's cheeks was purple; his respiration more like panting than breathing; his pain considerable about the region of the heart. On placing my hand over the left breast, the efforts made by the heart to perform its necessary functions, produced a sensation which cannot be described. There seemed two or three pulsations, one much more violent than the rest, and almost all at the same instant. The pulse at the wrist was feeble and irregular, so that it was scarcely possible to count it.

I directed a vein to be instantly opened by a large orifice, and staid to determine the extent to which the bleeding should be carried. After drawing about six ounces of blood, the operator could procure no more, though much pains were taken; and the patient remaining recumbent, did not faint. The symptoms were, however, all moderated, and the pulse more regular. After prescribing purgative and other remedies, directions were given to the surgeon to repeat the bleeding the moment any severe symptoms returned, to be governed by the effect in the quantity taken away, or if he should be doubtful of keeping the vein open as long as the pain continued, that I would be careful to be readily found, should he wish to see me.

On the following morning, I was informed that our patient had continued, during the evening, without any considerable paroxysm, though his breathing and pulse had not recovered themselves; but early in the morning, the pain having returned, the bleeding was repeated to the quantity of ten ounces.

The blood taken the first time had no particular appearance, but this might have arisen from the slow manner in which it trickled down the arm and along the basin. That taken afterwards, escaped by a full stream, coagulated freely, and exhibited a buffy appearance. The purgative had operated, and the patient was freer from pain. On being introduced to him, however, this relief appeared partly the effect of a state approaching to syncope. His cheeks were of a much darker purple, his respiration as before, and the pulsation at the heart, though less violent, was equally irregular; at the wrist it was obscure. Early in the afternoon my visit was repeated. His violent pain had not returned, but all the other symptoms remained; and in addition to these, his face was cold, and suffused with moisture. At half past six he died. Leave was obtained to open the

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body, which was done by Mr. Taunton, and the following appearances noticed by him.

"The thymus gland more evident than is usual at that age.

Many lymphatic glands greatly enlarged between the trachea and superior cava, by which the latter was pushed more forward, and a little to the right side.

The surface of the lungs inflamed, and the lobes adhered at the fissures.

The substance of each lung more firm than is usual in health, being barely boyant in water, contained tubercles, and in many parts pus.

The pericardium contained more water than usual, perfectly transparent, and yellowish. The coronary vessels and vasa vasorum on the pulmonary artery and aorta, were very turgid, so as to indicate a great determination of the blood to those parts.

The right auricle contained a large yellow coagulum, almost filling the cavity, adhering to it, and containing blood-vessels, which communicated with the substance of the auricle. This coagulum was continued into the ventricle in an oblong form. To this cavity it was more firmly attached by communicating vessels. There was also a considerable membrane of effused lymph adhering to the inner surface of the right ventricle.

Some points of apparently incipient ossification were found on the mitral valves.

The liver rather large, but the abdominal viscera were healthy, except that the mysenteric glands were enlarged, and some of them hardened."

The above description sufficiently shows the cause of death in this patient, and proves to the most sceptical conviction, that nothing but very early and copious bleeding could have prevented those effects of inflammation, which must have taken place in some of the first paroxysms. Yet, if the body had not been opened, suspicion might have arisen that the free bleeding produced the subsequent debility and death.

It is stated that ossification seemed to have begun in the valvulæ mitrales. In conversing with the friends of the deceased, I was informed that about twelve months ago he had symptoms somewhat similar to his last illness, tho' much milder; that he was bled and recovered, but from that time it had been remarked, that particularly after eating his colour was always very high, changed frequently, and his cheeks sometimes of a purple hue. He was also

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also never fit for the exertions of boys of his own age. It is too much to suspect that the beginning ossification in the valvulæ mitrales was the effect of inflammation during that previous illness? It is, I believe, an observation of Mr. Hunter's, that certain parts become bony, in order to support themselves under particular circumstances. This is usually, perhaps, a slow progress; but is there any thing inconsistent with pathology, in supposing that such a provision being made, may take place under any circumstances of action more powerful than parts, by their original structure can support? That a deposition of earthy matter in the heart may be the effect of inflammation, appears tolerably ascertained by the following case, which I had occasion to describe immediately after the event.

A boy, about 14 years of age, died in St. Bartholomew's Hospital, after three days of intense pain about the region of the heart, which yielded to no remedies, and during which, a watery effusion suddenly appeared in one foot, and was as suddenly transferred to the scrotum.

The late Mr. Sheldon opened the body, and a deposition of earthy matter was found in the substance of the heart.—I was present at the opening of an older subject, by Mr. Hunter; I did not see the patient during life, but his attendants described his pain as sufficiently intense to become the cause of his death. A deposition of earthy matter was found in the inside of the aorta, the surface of which, under the deposition, was rough.

If these two instances are admitted to be the effect of inflammation, may not such a degree as the patient can survive, prove the beginning of some kinds of aneurism, and thus terminate by a more tedious death?

It is probable that such cases are not very common. Dr. Baillie, whose opportunities have been larger than most men's now living, informs us that he has never seen this earthy deposition. It may seem strange, that one of so much more confined opportunities should have met with two instances. To this I can only say, that the bodies were both opened, on account of the peculiarity of the symptoms; and that the parts suspected, were particularly examined. The first circumstance shows the rariety of such incidents; and it may be added, that had either of these bodies been brought into a dissecting-room, the parts might have been preserved for injection, in which case the disease would not have been discovered.

These remarks, however, are intended to direct practitioners to one most important object; namely, in all

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cases of death after violent pain in the region of any important organ, to ascertain as often as possible, whether relief might not have been obtained by early depletion; or if the patient has died after the full use of that remedy, whether it would have been possible to have saved him by any other means.

If the instructions of Celsus are just, to bleed, *ubi quisquis intolerabilis dolor est*, it requires no argument to show the absurdity of resting till the object for which we begin is accomplished.—But the question cannot be fairly determined without frequent examinations after death.

Bridge Street.

No. 3.

CASES AND DISSECTIONS.

By Thomas Beddoes, M. D.

A Friend of mine had three noble opportunities of verifying the sound and natural state of the brain; and as he has seen many dissections, his report ought to have much weight.

C. D. received a wound from a very small file sharpened to a point. His respiration, when my friend saw him, was difficult and hurried. His eyes staring, and his countenance anxious. Bled with relief to the dyspnœa, which soon returned with restlessness and anxiety; pain in back; numbness in right hand and arm; a second bleeding relieved for a few minutes; perfectly sensible till cold sweats came on; and the scene closed in four hours from the accident. The instrument had entered the right side of the thorax, about an inch and a half below the nipple, slanting towards the sternum, and from the intercostal muscles between fifth and sixth ribs, passed through the right lobe of the lungs, entered the pericardium, and wounded the ventricle, dividing the coronary vein and artery. The pericardium was filled with coagulated blood.

Dura mater not more than naturally attached; vessels smaller than I have usually found them, and the pia mater less vascular. Cerebrum not hard, but it had an elastic firmness; cut beautifully white, not having any appearance of those red points usually found. The ventricles empty, and almost dry.

In

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In two others, one of whom died on the spot, the other the 6th day, from wounds of the chest, the appearances of the brain were exactly similar.

Such cases, I should think, give truer means of judging of the real state of the inflamed and uninflamed brain, than all the arts of anatomy.

It seems to me, that facts which I have formerly quoted, others related in the former papers, and some which I have seen since, establish a curious pathological consent between the brain and stomach. In various instances, an inflammation in the upper part of the stomach shall arise, when the brain with its appendages are turgid with blood in an extreme degree, or inflamed; and the stomach shall sometimes exhibit no pain or other sign of inflammation. This sympathy seems alike, whether the brain suffer from external or internal causes. Dr. Haen, as I have observed in my *Researches on Fever*, touched with a red hot iron the scull of a boy affected with amaurosis, and with periodical vomiting. The boy eat a good supper on the fourth day; had periodical vomiting, and died in six hours after his supper, with intense inflammation of his brain, and the cardia even gangrenous in two spots; prodigious adhesion of the lungs; as also was the case in a girl likewise cauterized, but whose stomach shewed no inflammation.

4th Case in your last Number, the head and stomach highly inflamed, though not exclusively.

5th Case, ditto ditto, intense inflammation of both head and stomach, though not exclusively confined to those parts.

Case 6. The brain must be considered as too full of blood here, though without intense marks of inflammation; how violent the inflammation of the cardia?

Case 8 speaks strongly for itself, where, in all that intensity of inflammation of the stomach, there was no sickness in the morning, or while the patient was sensible.

A patient, æt. 19, whose case I shall quote particularly on another occasion, lingered for several weeks under symptoms, without any apparent reference to the head, asked very early one morning for some water. The water was drank very comfortably; I ascertained this fact accurately from the attendants. The patient lay down. In about half an hour, alarming state of respiration, and almost sudden death.

The examination of the body was made in the course of the day. The head was prodigiously turgid with blood, and the cardia besides exclusively inflamed. There were stripes along

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along the stomach, leading up to the cardia, and when you pressed ever so gently upon the red spots, visible in the stripes, blood oozed. Here we have full assurance of the stomach at ease half an hour before death, and yet so inflamed on recent examination of the stomach.

A girl, æt. 13, was lately visited by my friend Dr. C. In a few hours I joined him. He, from preceding torpor and other symptoms, suddenly succeeded by insensibility, judged the head to be loaded with blood, or that it was a case of Hydrocephalus Internus. I could only assent to the opinion. The arterial system was singularly palsied, and out of all proportion to the loco-motive. The heart laboured excessively.—A number of punctures at the two visits were made, scarce a streamlet of blood flowed from divided vein or branch of the temporal; and when a little blood did flow, it rendered the pulse almost insensible; while the power of swallowing and performing some muscular movements was considerable. Clear as to the origin of the evil, we persevered in our efforts to draw blood; and I doubt not but a good stream of blood would have relieved the arterial system and head, but we persevered without success. We left our patient, expecting her very speedy death. She lingered, however, for thirty-six hours.

An early examination of the body, shewed that state of the head which we expected. It was every where gorged with blood, and near two ounces of lymph were found in the lateral ventricles, besides more within the membranes.

I had said during the dissection of the head, seeing such immense accumulation of blood or inflammation in the brain, *that we should find the stomach, especially the upper orifice, inflamed.* Yet this patient had drank or swallowed quietly, even after her insensibility, all that was put into her mouth. All the medical attendants during life were present, with the addition of Mr. King, surgeon, Hotwells, and his pupil Mr. Delaroche. This is the note of the state of the stomach taken down on the spot. "Stomach inflamed in a blotch near the cardia: some effusion of blood under the villous coat, and dark red spots within; the blotch gave out blood on slight pressure with the finger." The omentum was injected red.

The lungs were full of tubercles, though no alarming cough had ever been noticed.

I mean not to present this (secondary?) inflammation of the stomach as a general law. But I think, whenever the upper part of the stomach is found unexpectedly inflamed, the

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the head, (a circumstance so often neglected) should be opened too. Perhaps, the real disease of one of our most upright and illustrious diplomatic characters, may be illustrated by the preceding dissections. His able biographer has given the public a glimpse of the unsatisfactory occurrences attending his latter end. At the time of his death, an old and intimate friend related all the particulars to me, and shewed me the written account of the dissection.

Mr. ——— had had frequent attacks of gout during the last six years. The death of Mr. Pitt, "the affairs of Europe damped his spirits.* He had now been confined with flying gout for a couple of months. In this languishing reduced state, he was declared by several of the faculty to be convalescent till three days before his death. His own feelings led him to prefer creams, jellies, and other articles of a cool and softening nature. He was ordered stimulants, and even brandy."

Dissection shewed the gullet terminating in the stomach extremely vascular, and the internal membrane itself in an abraded state. This appearance extended about an inch into the œsophagus, and two inches along the coats of the stomach. Internal membrane of the right kidney unusually vascular.

In this Case, may there not seem suspicion that the head was charged with blood, or inflamed?

Observations on Hydrophobia, by Dr. Bradley.

It is not presumed that these observations will suggest any thing new or interesting to those medical practitioners, who have availed themselves of the usual means of acquiring information. They are designed for those who have not been so fortunate; or rather for the general public. Whenever we discover errors, whether arising from want of information, or *false* opinions, which lead to dangerous or calamitous consequences, no apology can be necessary for attempting to dissipate them.

An error obtains very generally in the metropolis, that the frequent cry of "mad dog" does not arise from any real disease existing in that animal, but from the avari-

cious

* Expression in private letter.

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cious desire of purchasing its skin cheaply. If this error had been exclusively confined to the lower orders, I should not have obtruded myself upon the attention of the public at this time; but I state with concern, that many practitioners of medicine in London do not believe in the existence of any such disease as that commonly called *Hydrophobia,* or more properly *rabid erethism.* This error has led to fatal consequences within my own observation; and I therefore trust that the following suggestions will not be deemed irrelevant.

Whenever any person has been bitten by a dog or cat, the animal should be immediately confined, and two or three days will shew whether there is any cause for preventive measures. If rabid symptoms appear in the animal, the bitten part should be speedily removed by the knife or caustic, or both, and the wound kept open some time. In the case related in our last number, which occurred in Rose Street, Soho, and the accuracy of which account I ascertained by personal inquiry, these precautions were negleted. In a case of another female child, about 6 years old, whom I saw this day in the Middlesex hospital, the same neglect both of the dog and the wound took place; and the consequence was alike fatal; but in this last case, the wound being very slight, the symptoms did not appear till about four months after the bite, and the disease itself was much slower in its progress; for the patient lived six days after the inability of swallowing cold water was observed.

The errors which I wish more particularly to eradicate are, the belief that human beings, and other animals besides those of the dog and cat kind, can inoculate this erethism by their bite. No fact in favour of such an opinion has ever been observed. This mistaken notion has given birth to others; such as, that human beings in the late stages of the disease, rave, bark like dogs, and endeavour to bite the by-standers. This is never the case, unless the patient is outraged by brutal treatment, and then the same conduct would be exhibited in any disease.

Connected with these false opinions is the very general belief that the laws permit, at least, if not command, medical attendants to put a period to the sufferings of the patient, and the fears of relations, by smothering or bleeding to death. I take it for granted, that no practitioner would incur the penalty of felony without benefit of clergy, by adopting such a practice. The idle custom of sending persons and other animals wounded by the bite

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of a rabid dog, to be dipped in the sea, is become nearly obsolete, in consequence of the repeated proofs of its inefficacy.

Having endeavoured to point out and remove these more dangerous and important errors, I shall state very briefly what is known and wanting to be known respecting rabid erethism. It would have been a most desirable circumstance for medical men to have been able, from the appearance of the bitten part, to have decided that the dog was rabid or otherwise; this is not the case, and the wound, unfortunately, heals quite as readily as any other of the same extent.

The period which elapses between the date of the bite and the appearance of the symptoms is very uncertain: the most usual is from five to seven weeks; and if symptoms similar to hydrophobia appear in less than three weeks, some other disease, particularly tetanus, which is nearly allied to rapid erethism, and often mistaken for it, ought to be suspected. The case in Rose Street, exhibited decided symptoms on the 27th day after the bite; but here the injury was extensive, and the quantity of poison applied to the wound was great. The reverse of all this took place in the case I saw in the Middlesex Hospital; but as I understand the physician under whose care that patient was admitted, intends to publish a detailed account of it, I shall not attempt to anticipate any of his observations. In the case of the Honourable Mrs. Duff, the disease occurred a year after the very slight wound that was inflicted.

Whatever be the interval, the first, and always most predominant symptom, through the whole course of this rapid disease, is an inability to bear the touch of cold water on any part of the body, and hence the name hydrophobia, or dread of water, came to denote the whole erethism. An attentive observer, however, may detect a lowness, a dejected look, and derangement of function, one or two days before the disease is confirmed; but this is seldom attended to, as being supposed to arise from some other cause. When the symptoms are established, cold air brings on the same spasms as cold water, and these spasms rise to convulsions, which increase in violence and frequency, till the uniform termination of the disease in death, releases the patient.

It may not be improper to mention, very briefly, what has been done, with a view to alleviate or cure this hitherto incurable malady. As the spasmodic symptoms always appear

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appear most urgent and distressing, blisters about the neck, warm bathing, opiates internally, mercurial friction, friction with olive oil, have all been exhibited with diligence and perseverance, but without the least advantage. It has indeed been long observed, that antispasmodics, both in tetanus and this erethism, totally fail of producing their usual effects.

I may perhaps be expected to suggest some new mode of treatment, but this is not to be obtained without much experience, which can scarcely fall to the lot of any individual in the present state of society. If the legislature of the country would sanction a conservatory for rabid animals, similar to that built by the Earl of Stamford for the preservation of foxes, such experiments might be instituted as would, doubtless, contribute essentially to the developement of the nature and laws of action of this most pernicious and subtil poison. If this however should be thought of too little importance to engage the attention of government, there can be no impropriety, that I can see, in prohibiting any dogs from being at large in the streets of towns and villages, where they can do no good, and may do incalculable mischief.

Some diseases, like some words, disappear, and others spring up in their stead. We know that leprosy disappeared about the time that *lues* was first seen in Europe. The small-pox is disappearing, and hydrophobia is becoming epidemic. Scarcely a month passes without instances of it in the metropolis. If any of our readers should not be disposed to place reliance on my opinions, and still contend that there is no such fatal disease as I have mentioned, I would refer them to the case of Mr. Bellamy of Holborn Hill, published by Dr. Fothergill; the case attended by Dr. Blackbourn, at Kensington; another by Mr. Ford of Golden Square; that published by Dr. Powel, which occurred so lately in St. Bartholomew's Hospital; that in the Middlesex Hospital; and that in Rose Street. And if these are not sufficient, I would then recommend them to peruse the elaborate Treatise on Hydrophobia by Doctor Hamilton.

Pall-Mall Court, Nov. 16.

CRITICAL

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CRITICAL ANALYSIS
OF THE
RECENT PUBLICATIONS
ON THE
DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Cases of Diabetes, Consumption, &c. With Observations on the History and Treatment of Disease in General. By ROBERT WATT, Member of the Faculty of Physicians and Surgeons, Glasgow. 8vo. London. 1808.

THESE Cases are preceded by an Introduction, in which we are told that the practice has been long prevalent in the North, of too indiscriminate feeding, and the apprehensions of blood-letting much too great. We have reason to believe the author is right, by the general sentiment which was excited on the first appearance of Dr. Hamilton's book, in favour of another evacuation. A further remark ows, which we should have thought less necessary, in favour of mercury. "This sentiment," says our author, "is not in unison with the anathemas of some modern declaimers, but is consonant to the experience of those who have employed this valuable medicine to eradicate, not to palliate, disease."

If by this our author means to object against the mode of *trying* mercury, in the small way, as an experiment, no one can object to it more than ourselves; nor can any impartial practitioner refuse to admit, that he has found many and great inconveniences resulting from this empirical practice. For the same reason, it would be absurd to lose sight of so powerful a medicine in many formidable diseases, or to use, without ascertaining its full effects.

The first case related of diabetes is of a labourer, 36 years of age, originally of a very robust constitution, and accustomed to hard work, who had a constitutional or habitual aversion to animal food. This, however, he endeavoured to conquer. It could not be ascertained how far he succeeded, but he died four months after his application for relief.

Some observations follow on this case. First, that Dr. Heberden does not seem founded in his remark, that Diabetes is a disease of debility, and for the most part only a prelude to approaching dissolution in the aged or infirm. The present, and several other subjects witnessed by our author, were of the middle age, and of an athletic figure and constitution. Another remark he adverts to, from the same author, that the urine is rarely sweet, whilst Dr. Cullen asserts that this may be considered as the chief diagnostic of the disease. Each of these physicians, venerable for their years, their extensive practice, and accurate remarks, had seen about the same

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same number of cases. The author very candidly accounts for their difference of opinion.

" I have always thought," says he, " that the division of Diabetes into Mellitus and Insipidus, was more fanciful than real, and more systematic than useful. That in one instance the urine is sweet, and in another insipid, is evident enough; but unless we can say where the one disease terminates, and where the other begins, or unless it suggest some variety in the practice, the distinction serves only to perplex the practitioner.

" The fact seems to be, that wherever there is a permanently increased, and altered secretion of urine, if it be carefully analysed, less or more saccharine matter will be found; but, if it be merely tried by the taste, in perhaps more than one half of the cases that occur, it would be pronounced insipid. The variety then is only in degree, and may perhaps be totally disregarded in practice. Dr. Bardsley has very properly remarked, that " when the sensible qualities of this fluid did not point out the least saccharine impregnation, yet, on exposing an extract, obtained from it by evaporation, to the test of chemical analysis, it was found to contain more or less of the oxalic acid." The saccharine matter may be present, but so covered with other substances, that it cannot be at all detected by the taste.

" These observations seem to account for the remarkable difference of opinion entertained by the two authors. Cullen probably drew his inference from the chemical analysis of diabetic urine, Heberden from simply tasting it."

The second subject was similar to the former in his employments, his habits, and his age. The disease was well marked, and long continued. The usual remedies proving ineffectual, the author was induced, by the appearance of a slight hæmoptoe, to try the effect of blood-letting: his success, though at first small, was sufficient to authorise a perseverance in so generally fatal a complaint.

" In this case," remarks our author, " venesection was employed in the most forbidding circumstances. The pulse was slow, feeble, and not altogether regular—his strength and spirits were almost gone—the lower extremities had been œdematous to the haunches, and were always cold and lifeless. When newly drawn, the blood was extremely dark; on cooling, the crassamentum was found to be as black as pitch, and totally devoid of tenacity. These were sufficient to have deterred me from trying this practice, had I not known, from former experience, that many of them were ill founded.

" The state of the pulse is a most fallacious guide in the practice of venesection. A strong full pulse, accompanied with pain, in some particular part of the body, certainly indicates bleeding; but it may often be of service, when the pulse is in the opposite extreme.

" The fear of inducing dropsy, by the too free use of the lancet, is in most instances groundless. On the contrary, there are many diseases,

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diseases, accompanied with dropsy, particularly with œdema, where venesection is of the highest service. To such as have never seen, or tried, the practice, this account will appear incredible. I have not often bled in ascites, because this is frequently brought on, or accompanied, with some incurable organic affection; but in recent cases of anasarca, I have seen as good effects from venesection, as from any other practice.

"Fears, arising from the rotten discomposed state of the blood, are equally ill founded. Nothing can be a stronger proof of this than the present case. The blood was pretty much the same, as is generally met with in Diabetes, and seemed to agree with the description given by Drs. Dobson and Rollo. Little change took place in the first three bleedings. The fourth, however, was greatly altered. It had become sizy on the top; and, on cooling, the crassamentum acquired a considerable degree of firmness. The fifth was remarkably inflamed; the buffy coat was thick, firm, and contracted, to the size of a shilling. The coagulum had assumed a globular form, and become so tenacious, that it could be held out upon the point of a probe. The sixth was still firmer; and, in addition to former appearances, the serum had acquired a white, milky, or chylous appearance. These changes in the blood were singular and unexpected; but I have seen them often since. I remarked too that the veins, which, as the patient himself observed, were at first smaller than usual, became more and more turgid, and the blood flowed with greater force every successive bleeding.

"The effects of this practice on the general system were no less remarkable than on the blood. Even the first bleeding produced a degree of hilarity, to which for many weeks he had been a total stranger. After the third, the pristine vigour of his mind was completely restored, and his feelings rendered more comfortable. After the fourth, the pulse rose to about 80; became firm and regular, and some degree of perspiration appeared on different parts of the body. Still, however, there was no very remarkable change produced on the urinary discharge. After the fourth, there was evidently a relapse. The fifth seemed to act like a charm. The recovery after this was instantaneous and striking. The painful sensations in his bowels left him; the powers of virility returned; the gums became sound; the skin soft and perspirable; the saliva, the urine, and the alvine discharge, natural; in six days he returned to his work; in two months he was restored to his original strength."

Besides venesection, the patient took the carbonated ammonia, on account of an acidity in his stomach; and also to see what effect might be produced by furnishing the constitution with a substance which it usually secretes; but he seems to have derived little benefit from it. Antimonial powder taken till it induced vomiting, gave a temporary alleviation; but this is imputed more to the lessened quantity of the ingesta, than to any altered action in the seat of the disease. To lime-water, the author is willing to

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allow more efficacy; but observes, that in the present instance it was not tried till the cure was nearly completed.

The third case is more interesting, inasmuch as the subject was in that rank in life, of that disposition, that every means could be procured; and there is no reason to doubt the attention paid to them. Besides this, the author availed himself of the situation of his patient, to procure the occasional attendance of a physician, by whose correspondence he is relieved from every suspicion, which, however improbable, he might apprehend from the eagerness of his own discovery.—The patient was a student at Glasgow, twenty-three years of age, and of a constitution, which had always required considerable exercise to maintain health. The first invasion and future progress of the disease, is accurately discriminated by the author, with a minuteness highly creditable to himself, and not less useful to the reader. We must, however, content ourselves with some general remarks; and shall avail ourselves of the summary observations presented in the work, and which we cannot improve.

One of the early symptoms was a distressing pain, rather like lassitude than inflammation, across the regions of the kidnies. If was, however, severe enough to render the touch painful, and sometimes to render him almost unable to walk. Frequent and painful micturition followed; but the quantity of urine was never sufficient to excite alarm, had not its properties been altered. Pain about the corpora cavernosa penis at times, so considerable as to resemble tic doloreux, but without any alteration in the appearance. Acidity of stomach, which was in some measure constitutional, was much increased; a peculiar dejection of spirits, which is remarked in all the other subjects, and even traced in many cases related by others. This is all we need add to the author's own summary, which we shall now offer.

"A case is useful, in proportion to the unity of the disease, and the simplicity of the treatment. The obstinacy of the present instance, rendered the practice more complex and protracted than could have been wished; though nothing could be more decisive than the latter part of it. The patient, in a very few weeks, was restored, from the greatest distress and weakness, to the most perfect health. It becomes, therefore, an object of importance, to analyse the case; and, if possible, to separate the parts which are useful from the rest, and particularly from those which actually did harm. The time may be divided into different periods.

"During the first, which extended from the beginning of October till the 13th, the patient abstained from animal food, wine, spirits, and every thing of a heating or irritating nature. The bowels were kept moderately open; diluents were freely used, and an opiate taken at bed-time. This practice was persisted in, for eleven or twelve days, without any advantage. On the contrary, the number of times of voiding urine had increased, from eighteen to twenty-six, or twenty-seven. The pulse had become weak and intermitting

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intermitting; he had lost three pounds of his weight, and his strength and spirits were declining rapidly. The quantity of urine varied from five to eight pints; at times it equalled the whole liquid ingesta, and afforded, by evaporation, a copious extract.

"In the second period, which extends from the 13th October till the 26th of the same month, the patient, as to meat and drink, was allowed to live pretty much in his own way; the bowels were kept moderately open, and the opiate was occasionally continued at bed-time. On the evening of the 15th, and morning of the 16th, the patient was persuaded to eat beef steaks, and found all the symptoms greatly aggravated. The four succeeding days he was very abstemious, and every thing seemed to wear a more favourable aspect. On the 20th his appetite became keen, and a second indulgence produced a second relapse. On the 21st, the emetic had a good effect; but on the 23d his appetite returned, and it was thought hard to deprive a person of nourishment, when his body was sinking so rapidly, and when the depletion had been so considerable. He was bled six times, and had lost above an hundred ounces of blood. But, notwithstanding the continuance of some of the most distressing symptoms, the improvement, in this period, was very conspicuous. The pulse, from being weak and intermitting, had become firm and regular; the inflammation of the eyes was gone, and his vision had become strong and distinct; the blood, which he used to pass with his urine, had left him, and the urine itself was diminished in quantity, and more natural in its appearance. But the most striking improvement was the restoration of the mind to its wonted energy.

"In the third period, from the 27th October till the 12th November, his health and strength were rapidly on the decline. Various injections were tried to allay local irritation, but without any advantage. The perinæum was blistered repeatedly. At first, this seemed to afford some relief; but after a more extensive trial, it was found unavailing. The anodyne was increased from thirty-five to sixty drops, and afterwards to an hundred; but even this very large dose produced but a transient respite from the pressure. In this period, the greater part of his diet was animal food; for the last seven days it was entirely so; but made no impression on the disease.

"The fourth period, extends from the 12th November till the middle of December. In this interval the treatment was completely changed, and the progress towards recovery was uncommonly rapid. At the commencement, though the patient was greatly worse on the whole than he had been at all, yet, in some respects, he had not relapsed to his original condition. The mind continued serene, and even retained a considerable portion of energy; the blood was still inflamed, and of due consistence. In this period he was bled four times, and lost about fifty ounces of blood. Seven blisters, each of them nearly the size of the hand, were applied to the region of the kidnies, and a pretty rigid absti-

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nence was observed. No medicine whatever was used till the 29th November, when he began the lime water, which seemed to have a happy effect on the state of his stomach and bowels, and probably contributed to his final recovery.

"From the above statement, some important inquiries arise. What share had the first six bleedings in accomplishing the cure? If the treatment, which was begun upon the 12th November, had been tried on the 1st October, would the result have been equally decisive? Are the three different branches of treatment, venesection, blistering, and abstinence, of equal importance? In what circumstances may any one of them supply the place of another, or be dispensed with altogether? Should the blood-letting be carried to a great extent at once, or will it answer the purpose better, to take it in smaller quantities, and at stated intervals? What are the criteria, which mark its being carried a sufficient length?"

We know not whether we should call the 4th case Diabetes or not. The patient had several symptoms of chronic indisposition; among the rest, unnatural appetite, frequent micturition, with no constant or considerable increase in quantity; a constant itching about the meatus urinarius, loss of strength, pain about the region of the kidnies, perpetual anxiety of mind, without sufficient cause. These, and some other symptoms, more particularly the hard dry inelastic skin, induced the author to remark the striking resemblance between the beginning of fever and the general symptoms of Diabetes; the principal difference between which, he remarks is, that the latter may continue for any indefinite length of time. We cannot, however, help remarking, that many of the symptoms alluded to, are common under many other indispositions; but that striking diagnostics attend each disease, and by those they are to be marked. In fever, we never meet with an inordinate appetite, nor that particular state of the urine which attends Diabetes. But if we even suppose that this case was not true Diabetes, it is highly worth recording; as one which shows with how much safety and advantage all the anti-phlogistic remedies may be used, in cases of extreme debility and mental depression.

The fifth was more rapid in its progress than we usually find Diabetes; and the conversion of the disease into diarrhœa, soon proved fatal. The observations annexed to this history show much learning, but are too logical. In pathological reasonings, the exceptions are so numerous, that they require more attention than the analogies. If the latter form the principal arguments, it is not difficult to confound all diseases and remedies also. We trust our author will receive this hint as it is meant; and, in a future edition of his work anticipate, in his own mind, many objections, of which a greater severity of criticism might make a very unfair advantage.

A long chapter on Practice follows. This abounds with good things, but is much too diffuse. We extract the following passage, not as the best by any means; perhaps, abstracted as it stands, it may

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may prove the worst. We acknowledge our disappointment, when men of real abilities, who possess discriminating powers with boldness of conception, should indulge the latter so far, as to expose their crudities unnecessarily. Many, which at first seem to shock the understanding, are made intelligible, appear plausible, and even rational, by being so far matured, that their true form may show itself divested of a drapery, both cumbrous and unnecessary.

"The buffy coat," says our author, when speaking of venesection, "has been a source of much error in the practice of venesection. Its absence in the first or second bleeding, and the patient's experiencing no relief from the operation, have often prevented the repetition of it, in the more advanced stages, when the buffy coat was sure to be found, and where bleeding was the only thing which could have saved the patient's life.

"There are many circumstances, with regard to this phenomenon, which cannot be easily accounted for. Its quantity has been supposed to point out the extent of disease, and the degree of danger. But it might with more propriety be considered, as pointing out the stage of recovery. It frequently does not exist, when the patient is at the worst; and is often in the greatest perfection, when the patient's health is so far recovered as to stand in need of no treatment.

"The globules of blood are so uniform in their appearance and texture, that we cannot easily suppose them to be destitute of organization. This may be admitted, without the necessity of supporting all the notions, which have been advanced concerning the vitality of the blood. Whether their organization be of the animal or vegetable kind, or something peculiar to themselves, they must have periods of growth, maturity, and decay. If they resemble organized bodies, with which we are acquainted, in embryo, they must be nearly transparent, and gradually acquire their natural colour, as they come to maturity. This is in some measure proved, by the circumstance, that the embryo in utero is colourless, though it must contain blood, and that blood must circulate through its body.

"From some reasonings of this kind, I have been led to suppose, that the lymph of the blood is the globules in their infant state; and that the buffy coat is a greater than ordinary proportion of lymph. This hypothesis is rendered probable by a number of circumstances, and is in some measure proved by the following fact. If the transparent buffy coat of inflamed blood be exposed to oxygen gas, or even to atmospheric air, it acquires a red colour. It does this more readily in the latter than in the earlier stages of reaction.

"The blood may consist of a promiscuous mass of globules, some of them in growth, others in decay. By disease, a number may be destroyed or rendered unserviceable: the carrying of these out of the system, and the rearing of new ones to supply their

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place, may be the object of reaction: the time and means necessary to accomplish that end, will necessarily modify the duration of the complaint."

By the globules, we suppose the author means the red globules. We should be glad to know, what is the difference of life and organization in a living body. If we admit organization, we admit not only life, but certain powers for self-preservation, or for some purposes in the animal, or for both; for to what other end can organization exist. If the buffy coat is sure to be found when the disease is so far advanced that reaction is powerful, can there be a more simple mode of accounting for it than Mr. Hunter's, viz. that the same increased action has taken place in the blood, by which its parts are rapidly separated; and in that separation, those which unite by what is called coagulation, form a firmer union, in proportion as they act with more strength. We are not certain whether we perfectly understand our author, that the buffy coat of inflamed blood will acquire a red colour when exposed to oxygen air. It has never occurred to us to make the trial; but it is certain that red particles will acquire the crimson tinge through the serum, though the buff never seems to change under the same situation. As we before remarked, we have extracted this as an objectionable passage; others might have been treated in the same manner; but still we are ready to admit, that few readers will peruse the practical remarks without advantage. We are, however, obliged to enter our protest against the indiscriminate and random use of mercury, which certainly did not at this time want Mr. Watts's sanction. However he may find it in the colder regions, it is certainly a remedy not to be given, without a certain determinate object in the warmer regions, and even in the English metropolis.

A chapter follows, giving an admirable account of one species of asthma, of which our author having seen several instances, reasons upon it as the general history of that disease. The remarks which follow are highly judicious, but the theory is, as may be expected, unsatisfactory. In this, the only blame we attach to our author, is in his attempting too much. That most diseases are preceded by chilliness, approaching to rigor, in proportion as the subsequent paroxysm is more or less severe, cannot be considered as a discovery; but the accuracy with which the succession of phenomena is traced, does credit to the author; particularly one circumstance too often over looked, but admirably described by Sydenham in his History of the Gout. We mean, that relief from all the threatening symptoms, and that temporary exhiliration which so frequently precede the immediate attack. A short chapter on cholera follows, and a longer one on colic. A chapter on consumption succeeds, introduced by the following paragraphs.

"In some instances, reaction scarcely takes place at all, and the patient dies soon after the application of cold. This has happened to people going into the cold bath, after they had been much heated. In other instances reaction comes on at an indefi-

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nite period, generally within one or two weeks, and terminates in fever, or in one or other of the complaints mentioned in last section. If the paroxysm be vigorous, and properly managed, a crisis obtains and the patient has a speedy and complete recovery. If reaction be feeble, a slow fever continues, which is aggravated by the slightest variation of regimen, exercise, or temperature. In other instances, after the balance is lost, there is almost no attempt in the system to recover itself: the patients take their food as well, or better, than in health; but they lose strength and spirits daily: the excretions are irregular, generally one of them in excess, and the rest deficient. But what chiefly characterises this state of body, is cold in the extremities, a general chilliness through the body, and a constant wish to sit near the fire: the patients too, from being social, cheerful, and enterprising, become dull, peevish, and partial to solitude.

"The perpetual low fever, and this want of tone in the system lead to fatal diseases; the first almost invariably to phthisis: the last to phthisis, scrophula, diabetes, dropsy, chorea, palsy, hydrocephalus, chlorosis, mania, &c. In almost every one of these a previous indisposition of weeks, months, and sometimes even years, may be distinctly traced; and very often, the first cause of the disease can be discovered."

Three cases follow, of which we shall only say that we have not met with similar ones. This may however be accounted for, from our not having witnessed an exactly similar treatment. The cases are certainly important, and the general success attending the practice, entitles them to a careful perusal.

A case of chorea follows, in a boy four years and 3 months old. Purgatives were insufficient to relieve him. At first only ʒix. of blood were taken from the jugular vein, nine days after ʒx. more were taken, from which time he gradually recovered by the assistance of purgative remedies. The following are our author's remarks on the case.

"In two weeks after this, the patient was in perfect health, and has continued well ever since. I have had no opportunity of repeating the practice; but in obstinate cases, which do not yield readily to purgatives, venesection might, perhaps, be employed with advantage. This case seems to prove, that the convulsive motions do not depend on obstruction in the bowels, for they were completely removed, even while the hardened scybala remained. I am apt to think that the convulsive motions, the torpid intestines, the chilly state of body, and the peevish irritability of mind are merely symptoms of a diseased habit. The bleeding had an instantaneous effect in relieving them; after the system was repaired, a few grains of calomel enabled the intestines to discharge scybala, on which, doses three or four times as large had no effect in the earlier part of the treatment. The relief obtained at the time the scybala are discharged, is rather an incident, than the effect of the latter."

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To this we shall make no other remark, but that we have usually found such diseases yield to chalybeates, sometimes after brisk purgatives, and sometimes without the use of them; but in saying this it is far from our intention to undervalue the author's practice, the success of which is a sufficient recommendation.

The work concludes with three cases of plethora, the last of which, after the bold practice of the author, was not relieved till by sudden menorrhagia the patient lost much more blood than all that had been taken at different periods by the lancet.

"I have ranked these three cases under the term plethora, because there was an obvious fulness of the sanguiferous system, and because a cure was effected by a profuse evacuation from that quarter. In the first instance the patient had a complication of diseases. The most urgent was the hysteric paroxysm, but she had also been long subject to menorrhagia and leucorrhœa. In the second instance there was a considerable tendency to an affection of the brain, at the time I saw him; but previous to that the hæmorrhoidal discharge and a debilitated state of the nervous system were the most conspicuous of his complaints; various means of relief had been tried in vain. In the last instance the lungs were in imminent danger; but it is probable she would have died of dropsy, in one form or other; it had commenced in the feet, and she had also symptoms of hydrothorax. She had an urgent thirst, and the urine was scanty and high coloured. In this case, it is doubtful, if depletion would have been carried a sufficient length to obtain a crisis, had not nature stepped in and taken the business into her own hands.

"In the treatment of all of them, my sole object was to restore the balance in the system, without regarding the local affections. After that was accomplished, not only the more conspicuous, but all the symptoms which marked a diseased habit disappeared."

Such is the nature of the work before us, of which, as far as our limits would permit, we have given we trust, an impartial, if not a perspicuous account. We discover many marks of genius in the author, but we suspect when he writes again he will do it with more caution. Yet we are pleased with his boldness, and ready to give him credit for a success, by which only he could have acquired it. Besides some transient remarks, which he will understand, we cannot help wishing he would in future, pay more attention to a very useful observation of his own.

"I believe, says he, that nothing has retarded the progress of medicine more than the attempts which have been made at Nosology. If half the pains had been taken to mark the slighter deviations from health, it would have led to results of greater importance; but these are often totally disregarded, and unless a regular combination of symptoms be discovered, so as to characterise a disease, the practitioner believes, and declares to the patient, that his feelings mislead him, and that he is really labouring under no complaint; unless it be a disordered imagination."

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Not only do we object to Nosology as a science, but in as much as it has been the means of introducing an affectation of language which is unbecoming the dignity of an useful art, or of a writer whose only wish is to inform. To what purpose are introduced the words *epistaxis*, *bulimia*, *morbus coxarius*, and some others we could mention. It is probable, that such may be the current language of the medical schools in the North; but this is not the case in the South. Though some of us are Greek scholars, yet etymology is not sufficient at once to present the meaning of such words; and if we consult nosological books, we find not merely the symptom intended to be designated, but an enumeration of others, which together form a *genus morborum*. These however are trifling objections in a work which contains so much original matter, that we cannot help recommending it to the reader.

A Letter to the Right Honourable SPENCER PERCEVAL, Chancellor of the Exchequer, &c. &c. &c., *on the Expediency and Propriety of regulating by Parliamentary Authority the Practice of Variolous Inoculation, with a View to the Extermination of the Small Pox.* By Sir EDM. CARRINGTON, late Chief Justice of the Island of Ceylon. 8vo. Lond. 1807.

THE learned author of this well penned address begins by expressing his reluctance at interrupting the Chancellor of the Exchequer from the important concerns of his office, but thinks, with much justice, that few things can be more interesting to the community than the present Inquiry. He then expresses a benevolent exultation on the Report of the Royal College of Physicians in London; to which, after it compliments for the simplicity of its style, and accuracy of its discrimination, he calls the particular attention of Mr. Perceval to the following passage

"Were encouragement given to vaccination, by offering it to the poorer classes without expence, there is little doubt but it would in time supersede the inoculation for the small-pox, and thereby various sources of variolous infection would be cut off: but till vaccination becomes general, it will be impossible to prevent the constant recurrence of the natural small-pox by means of those who are inoculated, except it should appear proper to the legislature to adopt, in its wisdom, some measure by which those who still, from terror or prejudice, prefer the small-pox to the vaccine disease, may, in thus consulting the gratification of their own feelings, be prevented from doing mischief to their neighbours."

This passage furnishes a text for the author to retrace and comment on our ancient laws, "which dignified the ages of our ancestors, and which, instead of gratefully applauding as wise, we so frequently pity as barbarous."

Respecting the first proposal of offering the benefit of gratuitous inoculation to the poor, we know not how it can be done with more attention than for some time past in the metropolis. There are four public charities instituted for that purpose, and the public is every where respectfully informed of the different stations in many other

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other parts of the town. We sincerely hope the same facility may be established in the country.

The author goes on to remark the evils of variolous inoculation. It cannot be wondered at if he offers little new on a subject which has been so long agitated. We shall therefore confine ourselves to the legal part of the pamphlet, as that appears to come more immediately within the scope of the author's inquiries.

In order to reconcile that part of the public whose prejudices might be startled from the apprehension of an encroachment on English liberty, we are reminded, that in the year 1720, when projectors were so numerous as to give a dangerous turn to the activity of the crafty, the legislature thought it necessary to interfere. That long before that time they had erected lazar-houses for the reception of those afflicted with elephantiasis, a disease supposed to have been introduced shortly after the Norman conquest. A statute, *de leproso amovendo*, is quoted at some length, and a quotation from Coke shows, that even that illustrious lawyer did not think such an act contrary to liberty. Among the various cases in which a man may, by the law of the land, be imprisoned by force of the King's writ, he mentions, for saving the people from contagion or infection. The same commentator afterwards confirms this opinion, in recognizing the true sense of certain doctrines of pleading. Bacton and Fleta lay it down as a rule, that a person who by law would be considered, either from contagion, or the deformity of appearance, unfit to be seen abroad, may claim excuse from appearing to plead.

The next visitation of epidemic diseases, the author considers the plague, of which he supposes the sweating sickness a mere species. If he is mistaken in this last suggestion, fair allowances must be made for the particular line of his studies, which are not medical.

On the subject of plague, it is remarkable that till the first year of James I. no provision had been made for preventing the extension of that disease. A proclamation had indeed been made in the 24th of Edward III. as cited by Rymer, which sufficiently demonstrates the ravages that disease had committed, by the attempts made to provide against them.

The statute of James, after a preamble reciting the ill conduct of some of the diseased, enacts, "That if any person or persons infected, or being or dwelling in any house infected, shall be by the mayor, bailiffs, constable, or other head officer of any city, borough, town corporate, privileged place, or market town, or by any justice of peace, constable, headborough, or other officer of the county (if any such infection be out of any city, borough, town corporate, privileged place, or market town), commanded or appointed, as aforesaid, to keep his or their house, for avoiding of further infection, and shall, notwithstanding, wilfully and contemptuously disobey such direction and appointment, offering and attempting to break out and go abroad, and to resist, or going abroad, and resisting such keepers and watchmen as shall be appointed, as aforesaid, to see them kept in; that then it shall be lawful for such watchmen with

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with violence to enforce them to keep their houses; and if any hurt come by such enforcement to such disobedient persons, that then the said keepers, watchmen, and any other their assistants, shall not be impeached therefore: (2) and if any infected person, as aforesaid, so commanded to keep house, shall, contrary to such commandment, wilfully and contemptuously go abroad, and shall converse in company, having any infectious sore upon him uncured, that then such person and persons shall be taken, deemed and adjudged as a felon, and to suffer pains of death as in case of felony: (3) but if such person shall not have any such sore found about him, then for his said offence to be punished as a vagabond in all respects should or ought to be, by the statute made in the nine and thirtieth year of the reign of our late sovereign lady Queen Elizabeth, for the punishment of rogues and vagabonds; and further, to be bound to his or their good behaviour for one whole year."

We have transcribed this act from the author, who remarks, that the same, with such modifications as the present state of society requires, may be applied with great public benefit to the regulation of variolous inoculation.

The author next remarks, that though a period of 132 years has now elapsed since the appearance of the plague in this nation, yet nothing has lessened the vigilance of government over the health of the people. No fewer than eight several Acts of Parliament have from time to time been framed to regulate quarantines. That of 38th of his Majesty provides not only against the plague, but all other contagious diseases which have or may rage in foreign parts. These acts have since been repealed, and their contents consolidated in the 45th of his Majesty, cap. 10. By this act, all vessels are to perform quarantine coming from, or having touched at any place, where his Majesty, by advice of his privy council, shall have declared it probable that the plague, or any other infectious disease or distemper, may be brought, authorising them to cut off all communication between any person infected with such disease, and the rest of his Majesty's subjects.

The wisdom of these provisions, it is added, has never been questioned. "But," continues our author, "will it be wise or consistent while we thus guard our country from exterior infection, voluntarily to cherish an infection equally malignant within its bosom?" With this view he proposes, that if variolous inoculation be not entirely prohibited, at least that it should be immediately regulated and limited. We have been thus particular on the contents of this pamphlet, not because we ever entertained a doubt of the constitutional power of the legislature to make laws for the preserving the health of the subject, but to satisfy those few who may retain such doubts. We perfectly agree too, with the learned author, that "a committee of the House of Commons, with the assistance they may command, will be the best judges of the practicability, the expediency, the necessity, of these or similar provisions." To this tribunal we commit the inquiry, not doubting that the period elapsed since

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since it has been instituted, will be sufficient to induce that maturity of judgment which so serious a question demands.

Important Researches upon the Existence, Nature, and Communication of the Venereal Infection in Pregnant Women, New-born Infants, and Nurses. By the late P. A. O. MAHON, Chief Physician to the Venereal Hospital du Vaugirard, &c. &c. &c. at Paris. *These are Contrasted with the new Opinions of the late* JOHN HUNTER *upon this Subject, together with Observations thereon.* By JESSE FOOT, Surgeon. 8vo. Lond. 1808.

OUR respect for the character whose opinions are here examined might have subjected us to the suspicion of partiality, had we gone minutely into these "Researches." We should however have endeavoured to do justice to both parties, could we have understood the author. But either he, the translator, or printer, has so obscured several passages, as to render us doubtful concerning the rest.

"CHAPTER I.—*Upon what has been the Opinion of Physicians on the Venereal Disease in New-born Infants?*

"In order to discuss these researches with the greatest perspicuity, I shall arrange the different authors who have written on the venereal disease in children, into two classes, and shall take for the basis of that division, not the disposition of the times when these authors lived, but the importance and extent of their works. In the first class will be comprehended the principal authors who have written since the beginning of the fifteenth century, until the middle of the eighteenth century. The second class will comprehend those who have written since the year 1750, until this time.

"ARTICLE I.—*The principal Authors who have written since the Commencement of the Fifteenth Century, until the Middle of the Eighteenth Century.*

"In surveying the most compleat collection of ancient authors who have written on the venereal disease, Aphrodisiacus de Luisinus published for the first time in 1506." *

In the mode of dividing these two classes, we suppose there must be some obscurity in the author, which by the note, it appears the translator has endeavoured to rectify in part, but we still remain in the same uncertainty. By Aphrodisiacus de Luisinus, we conceive must be meant the collection of Aloysius Luisinus, to which he gave the name of Aphrodisiacus.

We shall offer one more passage to convince the reader of the difficulty of knowing Mr. Hunter's meaning, if we are to take it from Dr. Mahon.

"Mr John Hunter has adopted a decided proposition, that pus alone contained the venereal virus, and that all cases that were venereal

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* This is surely the commencement of the sixteenth century. J. F.

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venereal that did furnish pus, except those of an incipient chancre or a gonorrhœa, could not communicate the disease. What ought to be concluded from such propositions, but entirely new and extraordinary consequences, and which appear astonishing to those to whom those principles have not the same degree of certainty and evidence. We will not examine here what erroneous consequences upon the nature and treatment of the venereal disease might be construed from the two propositions of which Mr. Hunter thought to prove the fact; we will content ourselves with analysing those arguments upon which he rested, to convince the want of communicability of the venereal virus from children to their nurses, and from the nurses to their children. We will hear Mr. John Hunter's opinion."

The following is the beginning of Dr. Mahon's remark on some of the cases produced by Mr. Hunter, of diseases resembling lues, but which, after stating minutely, he conceives are not venereal.

"The observations that are given by Mr. John Hunter, as diseases resembling the venereal disease, but on which he is mistaken in taking them for it."

"Dr. MAHON.—Critical remarks upon these observations, which prove that these diseases were true affections of the venereal disease."

Now, if they really were the venereal disease, how could Mr. Hunter be mistaken in taking them for it. However, in perusing Mr. Hunter's account, it appears that he believes they were not venereal. But to proceed with Dr. Mahon.

"We shall see that women infected with the venereal disease are subject to miscarriages, and that the waters are of a bad species, and the children born are robbed of the epidermis.

"The vessicles are what we have termed *phlictènes* in the table of symptoms. We say this symptom is frequent, and we shall place it among the unequivocal signs of the inoculation of the venereal disease."

We refer those who are satisfied with these unequivocal signs to the "Researches," or the Translation.

Report of the Diseases of Edinburgh for October, 1808.
By JOHN ROBERTON, Surgeon.

The weather for the first week of the present month was clear, and the mornings in general frosty. It then became variable, and about the middle of the month we had, during one whole day, a fall of snow. About the beginning of the last third of the month, we had some very heavy gales of wind, and till the end, the changes in the weather were

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were very frequent. —— The thermometer varied from 82° to 60°, but it was for the most part below 50°. The barometer, in the beginning of the month, was high, but, during the various changes of the weather, it varied considerably till about the end, when, independently of the changes, it rose to a considerable height.

During the present month, when families generally return from the country to their town residence, the healthy appearance that almost every one displays, is the clearest proof of the salubrious effects of the country air compared to that of Edinburgh, even although it is probably more healthily situated than any other city of equal extent.

On a review of the previous Reports, it will appear, that there has been no disease of any great importance peculiar to this city during the summer months; that most of the complaints have rather been in consequence of the previous winter and spring diseases, which being chiefly of an inflammatory nature, occasion diseases of local or general debility.

The bowel complaints formerly mentioned have greatly abated, nor does either scarlatina or intermittent fever seem general. Fever of the typhoid type does not seem to have abated, but on the contrary to have augmented both in frequency and severity.

We certainly are much indebted to the late Dr. Currie of Liverpool, for his valuable and accurate observations respecting the efficacy of cold in the removal of fever. It is strange, however, that, at this late period, after the nature of that practice ought so completely to be understood, we should find, as I have lately had occasion to see, the indiscriminate use of cold in every stage of the disease. On the present occasion, I had an opportunity to observe this in consequence of being called to alleviate the very unfavourable symptoms which followed its application in the cold stage. Dr. Currie's rules upon this subject are so extremely plain, that it is disgraceful in any one to mistake or misapply them. By the bye, I may mention that I have for several years past been in the habit of applying cold in a different, less formidable, and equally successful way, from that which is recommended by Dr. Currie. Concerning either affusion, immersion, or even bathing the body by means of a sponge, in some cases of fever, a very inconvenient operation, I attempted to apply the cold by means of a large bladder filled with the coldest water I could procure, and placed immediately over the region of the stomach, while a handful of common salt was dissolving in it. The

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The invariable effects of this mode of applying cold, were indeed surprisingly beneficial. In a few minutes the pulse fell, often from 120 to 90, or even fewer beats in a minute; the skin became cool, and in almost every instance sleep was induced within a very short period, often indeed before the bladder was removed from the breast. From this sleep, the patient usually awoke greatly refreshed and relieved in every respect, though perhaps for several days no such refreshing sleep had been obtained. This is certainly a more simple mode of applying cold in fevers; and I can vouch for its being as efficacious as any other recommended by medical writers.

Since the commencement of this month, inflammatory complaints have, as usual, on the approach of winter, made their appearance in various quarters of the city. There have appeared some cases of ophthalmia, some of pneumonia, and a still greater number of catarrh. The last disease, by the bye, I may mention, has, in various instances, been attended with a considerable degree of fever.

Most of the cases of ophthalmia have disappeared by the use of a solution for bathing the eyes, composed of the extract or some other preparation of lead. The pneumonia has easily yielded to bleeding, which it was seldom necessary to repeat; and the catarrh was removed by the use of cathartic medicines.

In my last Report, I mentioned a plan for preserving the feet from dampness, which there can be no question must be attended with the most complete success. I have, in two or three instances, since that period, advised such persons as were, from the nature of their employment, exposed to it, to furnish themselves with a cere-cloth shirt to be worn above their other shirt; and in every instance in which I have recommended it, the most marked benefit has been obtained. Even during the largest continued rains, they were, with the additional employment of the formerly proposed plans, preserved entirely free from wetness.

No. 4, St. James's Street.

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An Account of Diseases in an Eastern District of London, from October 20, to November 20, 1808.

ACUTE DISEASES.		Menorrhagia	5
Typhus	2	Amenorrhœa	6
Scarlatina Anginosa	2	Fluor Albus	7
Pleuritis	1	Rheumatismus Chronicus	7
Rheumatismus Acutus	3	PUERPERAL DISEASES.	
CHRONIC DISEASES.		Peritonitis	1
Tussis	7	Menorrhagia Lochialis	5
Tussis cum Dyspnœa	6	Mastodynia	7
Phthisis Pulmonalis	4	Diarrhœa	9
Vomitus	8	INFANTILE DISEASES.	
Diarrhœa	6	Convulsio	2
Prolapsus Ani	2	Erysipelas Infantile	3
Hemiplegia	1	Ophthalmia	3
Dyspepsia	6	Vermes	2
Hypochondriasis	2	Diarrhœa	5

Since the last Report an unusual quantity of rain has fallen, and very high winds have prevailed; and these have been frequently blowing from the north and north-east quarter. At intervals the sun has shone with considerable power, and in sheltered situations persons have found themselves comfortably warm, so that they have forgotten the danger to which a different situation might expose them. Various rheumatic affections have been the consequence of this inattention; and these, whether in the more acute or chronic form, have proved peculiarly troublesome and obstinate. Pains in the face and teeth have been very frequent. In some instances these have been mistaken for a common tooth-ache, and have been supposed to arise from one or more carious teeth, the removal of which, it was hoped, would prove the most effectual remedy. Teeth, however, have been drawn, but still the pain has continued, or has returned so soon as to convince the patient that he had mistaken the cause of his uneasiness, and that it was necessary to apply for some medical advice. Subsequent symptoms have discovered that rheumatic affection of the muscles of the face has been the principal cause of the uneasiness complained of, and a treatment adapted to the removal of such an affection has generally proved successful. Whilst a few grains of pulv. ipec. comp. have palliated the symptoms, or procured an intermission of pain; the use of the cortex has proved the most powerful means of lessening the frequency of the paroxysm, and of curing the disease.

INTELLIGENCE

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INTELLIGENCE.

At the Anniversary Meeting of the Colchester Medical Society, holden this day, August 23, 1808, the following Resolutions were entered on their Journals, in consequence of a motion made at their last Meeting, June 21st, by Dr. NEWELL, requesting the Members of the Society, at their next Meeting, to Report their Observations on the Security of Vaccination as a Protection from Small Pox, and the consequent Effects of it upon the Constitution.

"Resolved, That the Members of this Society, from a steady, candid and impartial attention to the effects of Vaccination, during a period of eight years, in which time several thousand persons have been vaccinated by them, think it their duty to give this public testimony of its perfect safety and security as a preventive of Small-pox; and further, that under the fullest conviction of the practice, they have not only recommended it to their patients, but introduced and practised it in their own families, amongst their nearest and dearest relatives. That they have at different times exposed many of their patients, long afterwards, to the contagion of the Small-pox in every way they could devise, with perfect safety from its infection, and that they have never been able to trace any subsequent diseases, as excited by Vaccination in the constitution.

"They feel it the more incumbent upon them, at this time, to make so public an avowal of their sentiments, as the Small-pox has lately been extremely prevalent, and fatal in this town and its vicinity, and because the prejudices against vaccination, particularly amongst the lower orders of the people, have been kept up by false and infamous reports, some of which have been artfully introduced into publications of notoriety and extensive circulation.

"They are fully convinced, that it is only by the unbiassed declarations of experienced and respectable practitioners in different districts, the public mind can be satisfied, and this most valuable discovery and practice universally adopted.

"Resolved, That this Society views with abhorrence the subtle, artful, and designing conduct of some practitioners, who continue indiscriminately to recommend Inoculation for the Small-pox or Cow-pox, as best suits their purposes, and by that means frequently, when the former is adopted, diffuse and spread that most dreadful and destructive pestilence through whole villages or populous districts, regardless what misery and distress they entail upon others; of such shocking conduct the Members of this Society have lately had too many proofs, and they earnestly hope that proper and efficient steps will ere long be taken by the Legislature to stop this horrid traffic.

Salus populi suprema lex.

"Resolved

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"Resolved, That Copies of these Resolutions be transmitted to the different Medical Journals now in circulation, and a sufficient number of them printed and circulated in this town and its vicinity.

S. R. NEWELL, Colchester.
Ph. GRETTON, ditto.
JOHN GODFREY, Coggeshall.
T. C. HARROLD, Nayland.
HENRY NUNN, Maningtree.
WM. TRAVIS, East Bergholt.
G. ROGERS, Manningtree.
WM. SILKE, ditto.
BENJ. SMITH, Wivenhoe.
NATH. SALTER, Boxford.
MAURICE MASON, St. Osyth.
R. NUNN, Colchester.
F. EAGLE, Coggeshall.
G. KEMBALL, Tolleshunt Darcey.
T. OSMOND, Thorpe.

Copy of a Letter from P. de BRUYN, Esq. *to* THOMAS WHEELER, Esq. *dated November* 4, 1808.

"Reading an account in the Medical and Physical Journal of this month, that you have been engaged in examining some poisonous fungi, I beg leave to send you a specimen of what appears to me to be the agaricus glutinosus, for the purpose of comparing it with those fungi which lately proved so deliterious at Mitcham. Mine, when fresh, on being bruised, became very gluish, and it differs both in colour and figure from those 'poisonous fungi' delineated in the above Journal.

"An instance occurred two years ago, where a man and his wife, after supping on these supposed champignons, gathered in Hyde-park, were almost immediately attacked with giddiness, head-ache, dilated pupils, and redness of the conjunctivæ. The woman, who had eaten most, had the additional symptoms of being slightly insensible, and of a stretching out of the arms and legs, so that it was not without difficulty she could be made to sit down. These were the leading symptoms. Within a quarter of an hour I saw them, and gave repeated doses of vitriolated zink and antimonium tartarizatum, before a satisfactory vomiting could be procured. Afterwards purgatives were taken, and by the following morning they quite recovered."

On the above useful communication, we have Mr. Wheeler's authority to remark, that though the poisonous fungus is considered by some as a variety of agaricus glutinosus, yet the difference is too permanent to be admitted as a mere variety. The pyramidal cacumen and the tortuous stem are the striking marks of the poisonous, which has hitherto had no discriminating name, unless it is the *agaricus cacumenatus* of Withering, of which, unfortunately, no figure is given.

The *agaricus glutinosus*, besides being without the cacumen, is covered with a glutinous substance, which shows itself without being bruised. The poisonous fungus was found without any viscidity on its surface. The specimen sent by Mr. de Bruyn is the true poisonous fungus, and the supposed difference remarked by that gentleman, shows the extreme difficulty of delineating living objects,

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objects, in all of which, even of the same species, there are shades of difference.

The following paragraph, copied from the Journal de l' Empire of the 7th instant, might lead us to believe that dangerous mushrooms have been more frequent this season than usual in other parts of Europe. It is much to be regretted that no description is annexed of the fatal production,

Pithiviers, 5 Novembre.

Un habitant de la commune de Boynes, canton de Pithiviers, departement du Loiret, étant allé dans un bois voisin pour y ramasser du bois sec, mena avec lui ses deux filles, âgees de 10 à 12 ans. Ces enfans trouvèrent une si grande quantité de champignons, et si beaux en apparence, qu'ils ne purent résister au desir d'en emporter une ample provision. Le soir, la mère apprêta les champignons, dont toute la famille mangea avec abondance, excepté le père, qui ne fit qu'y goûter, par complaisance, aimant mieux, dit-il, manger de la viande.

Vers deux heures après minuit, de violentes coliques, accompagnées de convulsions, se manifestèrent chez la plus jeune des filles, qui mourut après six heures de déchiremens d'intestins. Le même jour, la seconde la suivit : après les mêmes symptômes, on appelle le curé du lieu, qui se transporte au sussitôt. Son premier soin est d'interroger le père et la mère, qui, ne se sentant point dans leur ëtat ordinaire, étoient restés au lit. Après plusieurs questions réitérées, ils avouérent enfin qu'ils avoient mangé des champignons la veille. Alors, on manda un chirurgien, qui ordonna sur-le-champ les remèdes convenables; mais ils furent administrés sans aucun succés. Les malades périrent le lendemain. Il est à remarquer qu'un enfant à la mamelle, qui avoit été allaité dans la première nuit, fut aussi victime des suites du poison.

Dr. ADAMS has received a sample of opium from Madeira, the produce of Porto Santo, one of that cluster of islands. It is said to be the natural juice of a poppy yielded by incision. Its smell is much more aromatic than in the common opium. It is also free from every impurity. Trial has been made with it on a cancerous patient, who, from the long habit of using opium, was thought a fit subject for comparison. The following is the account given by the surgeon who attends her.

" Mr. ——— presents his compliments to Dr. Adams, and immediately upon receiving his letter, furnished their patient Mrs. —— with a box of pills made with the opium he was so good as to send him. The first night she took them, she experienced an uncommon good night; but since that he has given her the Madeira opium and the common alternately, and she has not been able to discover the least possible difference, though she has been very accurate in her accounts.

Clapham, Wednesday Night. Mr.

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Mr. WILLIAM SKRIMSHIRE, jun. has made some observations on the fecula of potatoes, and some other British vegetables, which, during the present high price of bread, seems particularly worthy of attention. One thousand grains of the former roots yielded 111 grains of fine white fecula, when perfectly dry, which he recommends not only as the most economical means of fattening cattle and pigs, but also as a very palatable and nutritious food for man. This fecula, which is generally known to laundresses by the name of potatoe starch, is obtained by the process which they employ. Formed into small cakes, and dried in the open air, or by a gentle heat, this preparation will keep for many years. When the fecula and pulp are mixed together, and thus prepared, half an ounce of it will, says Mr. Skrimshire, gelatinize so large a quantity of boiling water as to afford a sufficient meal for any labouring person in health. It may be sweetened either with molasses or sugar; or being boiled with an onion or pot-herbs, and seasoned with pepper and salt, it will make a very palatable, wholesome, and nutritious soup. If this preparation be boiled with milk, sweetened with sugar, and flavoured with a little wine or spice, it forms the most nourishing and restorative food that can possibly be administered to the sick and convalescent. From the ease with which it is digested, it is peculiarly adapted to the impaired organs of the debauchee, and the feeble powers of infancy. With a larger proportion of the preparation, a stiff jelly may be formed, which acidulated with lemon-juice, or any other vegetable acid, becomes the best domestic remedy that can be employed in every species of sore throat. The pure fecula, the author asserts, will be found superior in every respect to salep, sago, arrow-root, or any of the vegetable preparations of that kind, which have been so pompously advertised and recommended to the public by persons interested in the sale of them. Another use to which Mr. Skrimshire has applied potatoes, is likewise worthy of notice: "I have frequently formed a very grateful and nutritious beverage (says he) from potatoes sliced, roasted to a coffee colour, then ground in a mill, and mixed with a sixteenth of its weight of the best Turkey coffee." The other vegetable productions on which Mr. Skrimshire has made experiments, are the horse-chesnut, acorns, and the root of the red-berried briony, commonly called mandrake, and of the cuckow-pint, or wake-robin. All of these yield a large proportion of fecula, which forms a nutritious food for man or other animals.

The French chemists have not only repeated Mr. DAVY's experiments on the decomposition of alkalis, but have confirmed the accuracy of his researches, by obtaining similar results by a different process. Messrs. Gay and Thenard have succeeded in deoxidating potash by means of iron. The event is announced in *Correspondance sur l'Ecole Imperiale Polytechnique*, Number 10, in the following terms: "A letter from London, dated November 23, 1807, announced that Mr. Davy had succeeded, by means of a strong galvanic pile, of decomposing the two alkalis of potash and soda; and

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and that he had read a memoir to the Royal Society, in which he concluded that these two alkalies were metallic oxides. On the 8th of December, Messrs. Gay and Thenard, repeated Mr. Davy's experiments at the laboratory of the Polytechnic School, and actually obtained, at the negative pole of a pile with large plates, the two new metals, the existence of which had not even been suspected previous to Mr. Davy's experiments. The above chemists, however, continued the inquiry in a new point of view. They proposed to themselves the discovery of a substance sufficiently oxidizable to take off the oxygen from the alkalies, which had been ascertained to be metallic oxydes, and their experiments were attended with the greatest success. On the 7th of March, 1808, they informed the Institute of France that, upon treating potash with iron, in the fire of a reverberating furnace, the iron deoxidated the potash, and made it pass to the metallic state.

An experienced propagator of trees, shrubs, and plants, has discovered a cheap and efficacious method of propagating, by cuttings, all kinds of fruit trees, without the aid of artificial heat. By this novel and advantageous system, it appears that we are not only enabled with certainty to propagate any particular species, but preserve, with the strictest purity, the more valuable fruits, without liability to adulteration or degeneracy, the certain consequence of budding or grafting upon ungenial and improper stocks, and avoid the common inconvenience of receiving erroneous sorts from public nurseries.

Dr. CLOUGH, 68, Berner-street, will, on Monday the 9th of January, 1809, at ten o'clock in the morning, resume his Course of Lectures, on Puerperal Anatomy, Physiology, and Pathology.—A Syllabus and Prospectus of which, may be had of Dr. Clough, as above; J. Callow, Crown Court, Soho; and at the St. Mary-le-bone General Dispensary, No. 77, Welbeck-street, Cavendish-square.

An Evening Course for the convenience of such Students as may be otherwise engaged in anatomical pursuits, will be given on Tuesdays, Thursdays, and Saturdays, at Eight. The first Evening Lecture commencing on the 10th of January 1809.

Dr. LAMBE has in the press, Reports on the Effects of a peculiar Regimen on Cancerous Tumours and Ulcers. These Reports will appear early in the ensuing month.

Mr. CHARLES SYLVESTER, of Derby (late of Sheffield), has in the press an Elementary Treatise on Chemistry, the plan of which is in many respects original.

Mr. TAUNTON, Surgeon to the City and Finsbury Dispensaries, is about to publish a small work on Pathology, which will be illustrated with Engravings.

NEW

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NEW MEDICAL PUBLICATIONS.

Modern Medicine, containing a brief Exposition of the Discoveries and Doctrines that have occasioned the recent Advancement of Medical Practice, and an Inquiry how far the Principles of the Healing Art may become the Subjects of unprofessional Research. By David Uwins, M. D. 8vo. 6s.

An Answer to Mr. Highmore's Objections to the Bill before Parliament, to prevent the spreading of the Infection of the Small-pox. By Charles Murray.

A Review of the Report of the Royal College of Physicians of London on Vaccination. By Benjamin Mosely, M. D. 3s.

Identities Ascertained, or an Illustration of Mr. Ware's Opinion respecting the Sameness of Infection in Venereal Gonorrhœa and the Ophthalmia of Egypt. 8vo. 2s. 6d.

To CORRESPONDENTS.

We are much obliged to C. B. for the polite compliment with which he honours one of us, but regret that such a passage prevents our transcribing his letter. We assure him that he mistakes us, if he conceives we venture to alter communications with the names of the author annexed. But he is not less mistaken if he expects our Journal to become a vehicle for *mirth*, especially at the expence of those ingenuous writers, who, in the midst of a most laborious employment, are as willing to give as anxious to receive, every information in a science which can never be perfect. The punishment which the wisest man allots to those "who are wise in their own conceit," is, we doubt not, a very proper one, and should often be perused by us all. We recollect that the same wise man remarks, The beginning of strife is like the letting out of water.

We thank Mr. Davis for his very candid communication, which shall be inserted in our next, if he will permit us to shorten it; or if he will favour us with his address, we will return it to him for that purpose.

Mr. Roberton's paper shall appear in our next.

Press of matter on temporary subjects, obliges us to defer Dr. Ferguson's paper.

Medicus's Letter cannot be admitted in its present form. If he will send us a proper address, it will be returned with such remarks as will render it admissible.

Dr. Arnold and Jacobus came too late for insertion, but shall appear in our next.

CORRIGENDA.

Line 16, page 499, after the word growth, read, "intimately connected with the principle of irritability is the power of evolving heat."

Line ditto, page ditto, for this property, which is peculiar, read, "this property, which is *also* peculiar.

Line 11 from the bottom, page 544, for *never*, read *scarcely ever*.

END OF VOL. XX.

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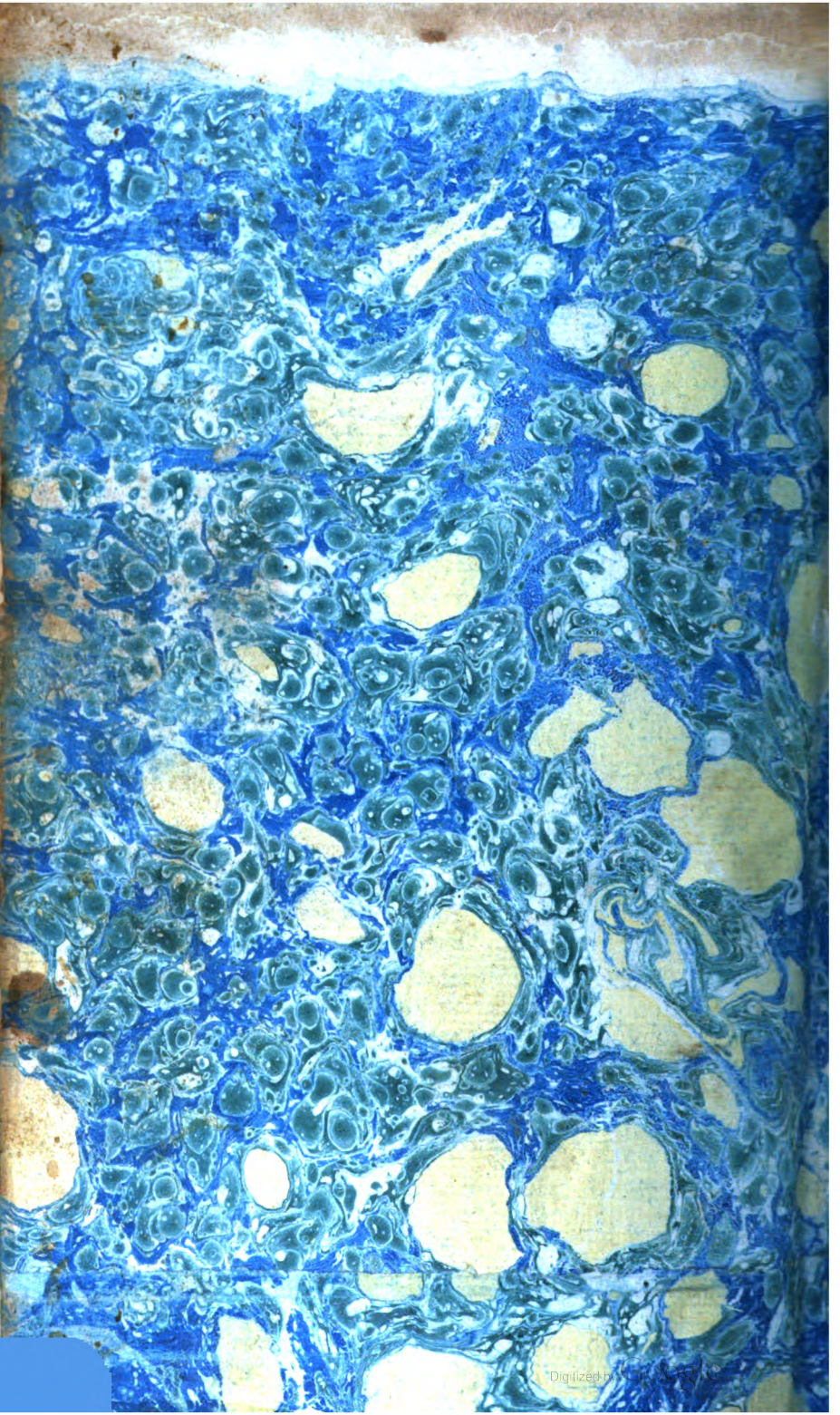
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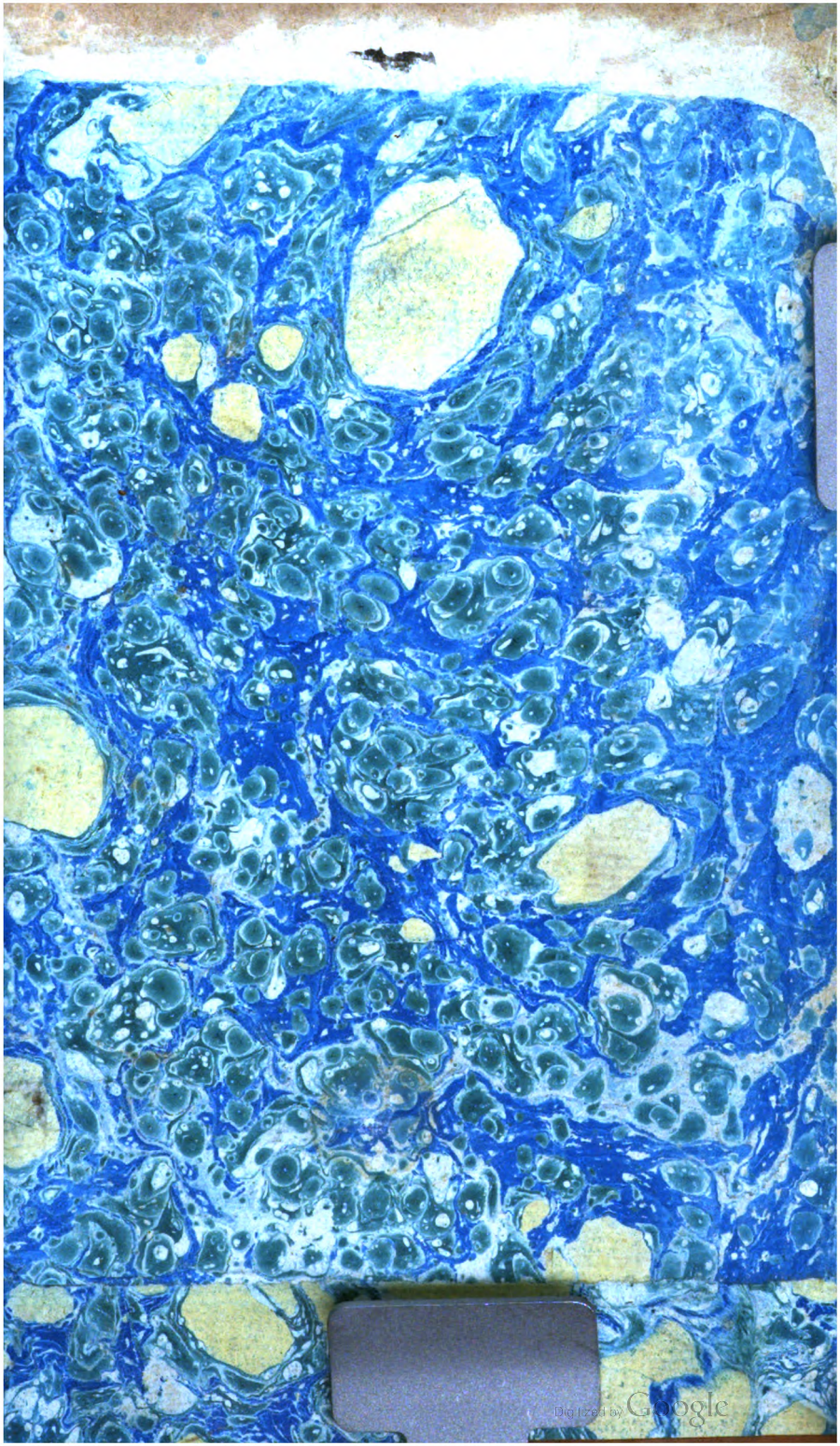
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